

NOTES ON THE ORNITHOLOGY OF SOUTHERN TEXAS, BEING A LIST OF BIRDS OBSERVED IN THE VICINITY OF FORT BROWN, TEXAS, FROM FEBRUARY, 1876, TO JUNE, 1878.

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The post of Fort Brown, Texas, in the immediate vicinity of which most of the following observations were made, is at the extreme southern point of the State, in latitude $25^{\circ} 53' 16''$, longitude $97^{\circ} 13'$. It adjoins the town of Brownsville, on the left bank of the Rio Grande, and across the river is Matamoros, in the Mexican State of Tamaulipas. The nearest part of the Gulf coast is about eighteen miles distant. The surrounding country is level, and mostly covered with low chaparral; towards the coast this becomes more sparse, and gives place to extensive prairies, broken by shallow, brackish lagoons and sand ridges, with a scanty growth of cactus and yucca. The average annual temperature is about 73° Fahrenheit; snow and ice are unknown, and slight frosts are rare. But little rain falls from March to September. This region offers an excellent field for the ornithologist. Besides a very large number of northern migrants that either remain throughout the winter or pass farther south, there are many forms characteristic of the river valley, and other Mexican species, either regular summer visitors or stragglers that are new to the United States fauna. A number of the latter class were obtained within our limits for the first time,* and others by Mr. G. B. Sennett; but there are doubtless many more yet to be found.†

Of the localities mentioned in this list, Brazos and Padre Islands are the parts of the Gulf coast nearest the fort; they are long, narrow sand ridges, almost destitute of vegetation. A similar formation is seen in the outer beach on the south shore of Long Island. Santa Maria and Edinburgh (now Hidalgo) are on the river, about twenty-eight and sixty miles respectively above the fort by road. Here the character of the country changes; the trees are much higher, and near the last-named settlement the land begins to rise. The avifauna, too, is somewhat different, and three species‡ in particular stop abruptly there. As a matter of local interest, an asterisk is prefixed to those species that are known to breed within the limits of the fort and government reservation.

* *Thryothorus ludovicianus* var. *berlandieri*, *Vireosylva flavoviridis*, *Cyanospiza versicolor*, *Myiarchus erythrocerus* var. *cooperi*, *Amazilia fuscicaudata*, *A. yucatanensis*, *Nyctidromus albicollis*, *Sturnella magna* var. *mexicana*, *Molothrus aeneus*, *Buteo albicaudatus*, *Parra gymnotoma*, and *Podiceps dominicus*.

† Several species of Parrots are found about Vittoria, ninety miles south of Fort Brown, some of which must occasionally cross the Rio Grande. During the summer of 1877, two specimens of a Trogon were killed north of the river, one near Ringgold Barracks, the second at Las Cuevas, some miles lower down. They were described to me by the persons who shot them, but unfortunately they were not preserved. [Undoubtedly *T. ambiguus*, Gould.—R. R.]

‡ *Campylorhynchus brunneicapillus*, *Auriparus flaviceps*, and *Callipepla squamata*.

I desire to express my indebtedness to Dr. T. M. Brewer and Mr. R. Ridgway for their assistance in many ways, and for their notes, which add so much to the value of the present paper.

1. *Turdus fuscescens*, Stephens.

January 1, 1877.

2. *Turdus migratorius*, Linn.

Occurs rather sparingly during the winter months.—(DRESSER, *Ibis*, 1865, 475.)

3. **Harporhynchus rufus var. longirostris*, (Laf.)

This fine songster is a common resident, frequenting shady thickets and rarely seen in the open. In habits, it scarcely differs from the Eastern var. *rufus*, and the large number of nests found here were quite as well built as those found in New England. The usual number of eggs is three, often two, more rarely four: the ground-color varies from greenish to reddish-white, more or less thickly sprinkled with reddish and brownish dots and spots. One set is sparingly covered with large clouded blotches, giving the eggs an appearance unusual in this genus. Fifty-two eggs average 1.08 by .82, the extremes being 1.13 by .86 and .97 by .75. In some adult specimens, there is a decided tendency to whitish tips to the outer tail-feathers, as in var. *rufus*.—(*H. rufus longirostris*, SENNETT, B. Rio Grande, 3.)

4. **Harporhynchus curvirostris*, (Swains.)

This Thrush is about as common as the preceding species, and is resident. They are not often seen together, however, as this bird prefers more open and sunny localities, especially sparse chaparral, where the prickly pear grows. Here it passes much of its time on the ground, running rapidly about in search of small land-shells and insects. I cannot confirm the praises of the song of this bird given by Couch and Heermann: it seems to me to be one of the most silent of the song Thrushes. Its alarm note is a sharp *whit-whit*. The nests are usually placed among the fleshy joints of the prickly pear, or in some of the many thorny and almost impenetrable bushes found in Southern Texas: they are often seen in the dense prickly hedges that surround most Mexican *jacals*. They are, as a rule, readily distinguishable from those of the Texas Thrasher and Mocking-bird by the almost invariable lining of yellow straws, giving a peculiar appearance to the nest. They are also more compactly built, are well cupped, and often have the edges well guarded by thorny twigs. The eggs are usually four in number: the ground-color is a deep greenish-blue (more rarely pale yellowish), rather sparsely sprinkled over the entire surface with very fine brown dots. They average $1.13 \times .80$: extremes $1.18 \times .83$ and $.94 \times .72$.—(DRESSER, *Ibis*, 1865, 482.—SENNETT, B. Rio Grande, 4.)

5. **Mimus polyglottus*, (Linn.)

A very common resident. By the 20th of May, many pairs have eggs

of the second brood.—(DRESSER, *Ibis*, 1865, 481.—SENNETT, B. Rio Grande, 3.)

6. *Galeoscoptes carolinensis*, (Linn.)

A few seen during the migrations: some pass the winter here.

7. *Sialia sialis*, (Linn.)

Uncommon. Two pairs, seen at Edinburgh in May, 1876, were undoubtedly breeding.—(DRESSER, *Ibis*, 1865, 475.—SENNETT, B. Rio Grande, 6.)

8. *Regulus calendula*, (Linn.)

Found in some abundance from November to March.—(DRESSER, *Ibis*, 1865, 476.)

9. *Poliophtila cærulea*, (Linn.)

Abundant during the migrations, a few passing the winter and a considerable number remaining to breed. A nest taken April 24, 1877, was placed on a dead lichen-covered branch of an ebony-bush about six feet from the ground. It was supported by three upright twigs, and was so well concealed that I did not notice it till the female flew off, though I had been standing with my head within a foot of it. It contained five eggs that would have hatched within a few days.—(DRESSER, *Ibis*, 1865, 485.—SENNETT, B. Rio Grande, 6.)

10. * *Lophophanes atricristatus*, Cassin.

A common resident. The usual notes of the species are like those of the Eastern Chickadee: it has, in addition, a loud whistling song, much like that of the Cardinal. A nest found near Edinburgh, April 26, 1876, was in a decayed branch, about fifteen feet from the ground, and contained six nearly fledged young: the males had well-developed crests. The nest proper was composed of various soft materials like that of *Parus atricapillus*. About four weeks later, the same pair were making preparations for a second brood in an old *Picus scalaris* excavation just above my tent, but I was obliged to leave before any eggs were laid. A nest found about the middle of May of the following year was, I am confident, of this species. It was in a vertical hole in a stump, enabling the five eggs to be plainly seen: these seemed somewhat larger than eggs of *P. atricapillus*, but otherwise were similar. As the parents were not seen, I left, intending to return in a short time, but was prevented from doing so for several days, when the eggs had been destroyed by some animal. Another nest, found April 18, 1878, was placed in a deep crack in the trunk of a tree: it contained several young.—(DRESSER, *Ibis*, 1865, 485.—SENNETT, B. Rio Grande, 6.)

NOTE.—An unidentified egg from Matamoros, but not distinguishable from one identified by Mr. Sennett as of this species, measures .62 by .48, is of an oval shape, has a white ground finely sprinkled over with purplish-brown dots. These are more abundant about the larger end, and form a ring around the latter. Fine, indistinct shell-markings give a purplish cast to the ground, which is, however, of a pure white.—T. M. B.

11. *Auriparus flaviceps*, (Sund.)

I have not observed this species in the immediate vicinity of Fort Brown, but it was rather common at Edinburgh in April and May, frequenting mostly amargosa chaparral. Several of its curious nests were found placed on horizontal branches of ebony and amargosa bushes about five feet from the ground. The outside was composed of thorny twigs well interlaced: the inside was warmly lined with fur and feathers. The entrance was at one side, barely large enough to admit the bird, and somewhat projecting, giving the entire nest an oval shape. The birds were excessively shy, and were obtained with difficulty.—(SENNETT, B. Rio Grande, 6.)

12. **Thryothorus ludovicianus* var. *berlandieri*, Couch.

A rather common resident, and found in all situations. Its song and habits are probably not different from those of the Great Carolina Wren. Although several pairs breed each year within the fort, I did not succeed in finding their nests, which I think were placed in some thick brush piles and fences. At least two broods are raised, and the scarcely fledged young show the characteristic rufous of the under parts. A set of four eggs of this variety now before me, taken near Edinburgh in an old Woodpecker's excavation, average $.73 \times .54$. In three, the ground-color is white with a reddish tinge, thickly dotted with reddish and pale lilac, especially at the larger end. The fourth has the ground-color a warm reddish, like many eggs of the House Wren. A young brood frequented a pile of brush near camp at Edinburgh: they were very tame, coming into my tent and examining its contents with the greatest interest, not minding my presence in the least. The notes are loud and varied, but I am not able to say how much they may differ from those of var. *ludovicianus*.—(*T. ludovicianus berlandieri*, SENNETT, B. Rio Grande, 8.)

13. **Thryomanes bewicki* var. *leucogaster*, Baird.

Thryothorus bewicki, SCL., P. Z. S. 1859, 372 (Oaxaca); Catal. 1861, 22, No. 141 (part).—SCL. & SALV., Nom. Neotr. 1873, 7, No. 11 (Mexico).—COUES & SENNETT, Bull. U. S. Geol. and Geog. Survey Terr. vol. iv, No. 1, Feb. 1878, 9 (Brownsville and Hidalgo, Texas).*

Thryothorus bewicki var. *leucogaster*, BAIRD, Review, 1864 127 (San Antonio and Ringgold Barracks, Texas; Sta. Rosalia, Tamaulipas, and New Leon, Mexico).

* Mr. Sennett's specimens having been compared with the extensive series, embracing the several races of this species, in the National Museum collection, prove to be the var. *leucogaster* of Baird, and not the true *bewicki*. The National Museum possesses two specimens of the latter from Waller County and Brazos, Texas, but none from the Rio Grande, where probably only the var. *leucogaster* occurs, while it also probably does not penetrate farther into the State. The two specimens of true *bewicki* alluded to above were captured December 13 and 14, 1876, and were perhaps merely winter visitors. They are absolutely typical of the race, and, when compared with Mr. Sennett's specimens, the great difference in coloring is at once apparent.—R. R.

A common resident about Fort Brown, but fifty or sixty miles higher up the river it becomes less abundant. Few birds have a greater variety of notes than this species, and I have frequently been led by a strange song through dense chaparral only to find this little bird perched upon the topmost twig of an amargosa bush apparently enjoying my disappointment. Their principal song is much like that of the Song Sparrow, but sweeter. It probably raises three broods, as I have seen it leading fully fledged young as early as March 27. Its nests are placed in a variety of situations. I have found them in an old Woodpecker's nest, placed between three or four joints of the prickly pear, forming a bulky structure, and among the twigs of various dense thorny bushes. A set of six eggs, now before me, average $.68 \times .50$. I have no eggs of var. *bewickii* at hand with which to compare them. A second set of five, taken on the 2d of May from a nest among the joints of a cactus, are smaller than the preceding, averaging $.62 \times .50$; the markings are much fainter and finer, and the two sets are quite different in appearance. Three other sets taken subsequently vary greatly in size and markings. In some, the latter are very fine and inconspicuous; in others, there are heavy markings of reddish and lilac. Thirty eggs average $.63$ by $.45$, the extremes being $.70$ by $.52$ and $.60$ by $.46$.

NOTE.—The eggs of *T. leucogaster*, as compared with those of *bewicki* and *spilurus*, exhibit many points in common, and do not vary more than the eggs of the same species are often found to differ. Nine eggs of the Texan form, *leucogaster*, are, in size, a trifle the largest, and all of them are much more deeply marked with larger and more confluent blotches of reddish-brown. In size, six eggs of *bewicki*, from Mount Carmel, Ill., collected by Mr. Ridgway, are not quite equal to *leucogaster* and a little less strongly marked, the spots being nowhere confluent. Five eggs of *spilurus* from California are still less in size, and their markings are smaller, fewer, and of a lighter color, one being of an almost immaculate white.—T. M. B.

14. *Troglodytes aëdon*, Vieill.

Rather uncommon during the winter months.

15. *Troglodytes aëdon* var. *parkmanni*, Aud.

A single specimen of this variety was taken in the autumn of 1877.

16. *Telmatodytes palustris*, (Wils.)

One obtained December 16, 1876.

17. *Anthus ludovicianus*, (Gmel.)

Very abundant from October to March. I have seen a few as late as April 28.—(DRESSER, Ibis, 1865, 476.)

18. *Mniotilta varia*, (Linn.)

Common during the migrations; a good many pass the winter.—(DRESSER, Ibis, 1865, 476.)

19. *Helminthophaga chrysoptera*, (Linn.)

Several specimens taken in the spring.—(DRESSER, Ibis, 1865, 478.)

20. *Helminthophaga pinus*, (Linn.)

One specimen taken at Edinburgh (Hidalgo) in May.

21. *Helminthophaga ruficapilla*, (Wils.)

A male obtained in April approaches the supposed "*var. ocularis*" in the restriction of the yellow of throat.—(DRESSER, Ibis, 1865, 478.—SENNETT, B. Rio Grande, 12.)

22. *Helminthophaga celata*, (Say.)

Rather common during the colder months.—(DRESSER, Ibis, 1865, 478.—SENNETT, B. Rio Grande, 12.)

23. *Helminthophaga peregrina*, (Wils.)

Less common than the preceding.

24. *Parula americana*, (Linn.)

Occurs during the migrations.—(DRESSER, Ibis, 1865, 476.—SENNETT, B. Rio Grande, 11.)

25. *Parula nigrilora*, Coues.

Arrives about the third week in March, and passes the summer among thick woods and near the edges of lagoons where there is Spanish moss. Here they are quite common, and their song is constantly heard. A nest found July 5, 1877, was in a small bunch of the moss about eight feet from the ground: with the exception of four or five horse-hairs, there was no lining. It contained three young.—(COUES & SENNETT, Bull. U. S. Geol. Surv. Terr. vol. iv, Feb. 5, 1878, 11.)

26. *Dendrœca œstiva*, (Gmel.)

Not uncommon during the migrations.—(DRESSER, Ibis, 1865, 478.)

27. *Dendrœca coronata*, (Linn.)

This is perhaps the most common of the winter residents, and is found in the greatest abundance from the latter part of October to April. About the latter part of March, there is an arrival of males from the south in nearly full breeding plumage.—(DRESSER, Ibis, 1865, 478.—SENNETT, B. Rio Grande, 13.)

28. *Dendrœca maculosa*, (Gmel.)

Rather rare in the spring.—(DRESSER, Ibis, 1865, 478.)

29. *Dendrœca blackburniæ*, (Gmel.)

A female taken May 3 at Edinburgh.—(DRESSER, Ibis, 1865, 478.)

30. *Dendrœca dominica var. albilora*, Ridg.

One of the first migrants to return in the autumn, when it is not rare.

A few pass the winter.—(*D. superciliosa*, DRESSER, Ibis, 1865, 478.—*D. dominica albilora*, SENNETT, B. Rio Grande, 13.)

31. *Dendrocæca pennsylvanica*, (Linn.)

Several seen in April and May.

32. *Dendrocæca striata*, (Forst.)

A single specimen taken in August.

33. *Dendrocæca castanea*, (Wils.)

Not rare in the spring migration.—(DRESSER, Ibis, 1865, 478.)

34. *Dendrocæca virens*, (Gmel.)

Taken in May and November.—(DRESSER, Ibis, 1865, 477.—SENNETT, B. Rio Grande, 13.)

35. *Siurus nævius*, (Bodd.)

Rather common in the spring and fall.—(*S. noveboracensis*, DRESSER, Ibis, 1865, 477.)

36. *Siurus motacilla*, (Vieill.)

March 31, 1877.—(SENNETT, B. Rio Grande, 13.)

37. * *Geothlypis trichas*, (Linn.)

Found throughout the year. Summer birds approach var. *melanops*, and are perhaps referable to that variety.—(DRESSER, Ibis, 1865, 476.)

38. *Geothlypis philadelphia*, (Wils.)

A female taken within the fort on September 7, 1877.—(DRESSER, Ibis, 1865, 476.)

39. * *Icteria virens*, (Linn.)

A common summer resident, arriving at Fort Brown about March 26. Here it is much more common than higher up the river. Individuals breeding in Southern Texas are decidedly smaller than those taken in New England, bearing about the same relation to them that *Icterus* var. *affinis* does to var. *spurius*. Thirty-three eggs average $.87 \times .64$.—(SENNETT, B. Rio Grande, 13.)

40. *Myiodiactes mitratus*, (Gmel.)

Several specimens taken in April, 1876.—(DRESSER, Ibis, 1865, 478.)

41. *Myiodiactes pusillus*, (Wils.)

Abundant during the migrations, returning in autumn about the 10th of August.—(DRESSER, Ibis, 1865, 478.)

42. *Myiodiactes canadensis*, (Linn.)

May 2, 1877.—(DRESSER, Ibis, 1865, 478.)

43. *Setophaga ruticilla*, (Linn.)

Not rare in spring and fall.—(DRESSER, Ibis, 1865, 479.—SENNETT, B. Rio Grande, 14.)

44. *Progne subis*, (Linn.)

Occurs during the migrations. I have seen them as early as January 20.—(*P. purpurea*, DRESSER, Ibis, 1865, 479.)

45. *Petrochelidon lunifrons*, (Say.)

Very common from early in April until the latter part of August. It is one of the most abundant of the summer visitors, and is the only Swallow that breeds here. I have not been able to detect *P. swainsoni*, Sel., of Mexico.—(SENNETT, B. Rio Grande, 15.—*Hirundo l.*, DRESSER, Ibis, 1865, 479.)

46. *Hirundo erythrogaster* var. *horreorum*, Barton.

The latest Swallow to arrive in the spring and the earliest to return in the autumn; first seen about April 12, or earlier, and August 9.—(*H. horreorum*, DRESSER, Ibis, 1865, 479.—SENNETT, B. Rio Grande, 15.)

47. *Tachycineta bicolor*, (Vieill.)

Common during the migrations. Some of this species must pass the winter at no great distance from here, as I have frequently seen small flocks in November, December, and January, after a few warm days.—(SENNETT, B. Rio Grande, 15.)

48. *Cotyle riparia*, (Linn.)

Not rare during the migrations. One of the latest Swallows to return in the autumn.—(DRESSER, Ibis, 1865, 479.)

49. *Vireosylva olivacea*, (Linn.)

May.—(*Vireo o.*, DRESSER, Ibis, 1865, 480.—SENNETT, B. Rio Grande, 16.)

50. *Vireosylva flavoviridis*, Cassin.

Vireosylva flavoviridis, CASSIN, Pt. Phila. Acad. V, Feb. 1851, 152; VI, pl. ii (Panama).—SCL., P. Z. S. 1856, 298 (Cordova); 1859, 375 (Oaxaca; April); Catal. 1862, 44, No. 264 (Guatemala).—SCL. & SALV., Ibis, I, 1859, 12 (Guatemala); Nom. Neotr. 1873, 11, No. 3 (Mexico to Panama).—BAIRD, Review, May, 1866, 336 (Monterey, Mazatlan, and Rosario, near Colima, Mexico; San José, Costa Rica; Isth. Panama).—SUMICHRAST, Mem. Boston Soc. I, 1869, 547 (Orizaba; Alpine Reg.).—BOUCARD, Cat. 1876, 215, No. 6665 ("N. America").

Vireo flavoviridis, BAIRD, B. N. Am. 1858, 332.

Phyllomanes flavoviridis, CABAN., Journ. 1861, 93 (Costa Rica).

A single specimen, a male, taken within the fort, August 23, 1877.

51. *Vireosylva gilva*, (Vieill.)

October 2, 1877.—(*Vireo gilvus*, DRESSER, Ibis, 1865, 480.)

52. *Lanivireo solitarius*, (Wils.)

August 23, 1877.—(*Vireo s.*, DRESSER, Ibis, 1865, 481.)

53. **Vireo noveboracensis*, (Gmel.)

A common resident, breeding abundantly.—(DRESSER, Ibis, 1865, 481.—SENNETT, B. Rio Grande, 16.)

54. *Vireo belli*, Aud.

A single specimen taken.—(DRESSER, *Ibis*, 1865, 481.—SENNETT, B. Rio Grande, 16.)

55. *Ampelis cedrorum*, (Vieill.)

Seen in small flocks during the migrations; doubtless pass the winter here.—(DRESSER, *Ibis*, 1865, 480.—SENNETT, B. Rio Grande, 16.)

56. *Collurio ludovicianus* var. *excubitoroides*, (Swains.)

Abundant from about the first of September until April. I do not think that any remain to breed.—(*C. ludovicianus excubitorides*, SENNETT, B. Rio Grande, 16.—*Collyrio ludovicianus*, DRESSER, *Ibis*, 1865, 480.)

57. **Pyranga æstiva*, (Gmel.)

Not rare during the migrations; a few remain here all summer.—(DRESSER, *Ibis*, 1865, 479.—SENNETT, B. Rio Grande, 14.)

58. *Chrysomitris tristis*, (Linn.)

Not rare during the winter months.—(DRESSER, *Ibis*, 1865, 479.)

59. *Passerculus savanna* var. *alaudinus*, Bon.

February.—(*P. alaudinus*, DRESSER, *Ibis*, 1865, 487.)

60. *Poocetes gramineus* var. *confinis*, Baird.

Spring and autumn.—(*P. gramineus*, DRESSER, *Ibis*, 1865, 487 —*P. gramineus confinis*, SENNETT, B. Rio Grande, 17.)

61. *Coturniculus passerinus*, (Wils.)

January.—(DRESSER, *Ibis*, 1865, 487.)

62. *Chondestes grammica*, (Say.)

This species is most abundant during the migrations in April and September; but a few pass the winter, and some remain to breed. In this vicinity, they appear to build indifferently on the ground or in bushes. When in the latter situation, the nest externally is rather bulky, but is neatly finished inside with hairs and rootlets.—(DRESSER, *Ibis*, 1865, 488.—SENNETT, B. Rio Grande, 19.)

63. *Zonotrichia leucophrys*, (Forst.)

Abundant during the colder months.—(SENNETT, B. Rio Grande, 19.)

64. *Zonotrichia intermedia*, Ridg.

This variety seems to be about as common during winter as the preceding.—(*Z. gambeli*, DRESSER, *Ibis*, 1865, 488.)

65. *Zonotrichia albicollis*, (Bon.)

On May 11, 1877, I heard the unmistakable song of this species within the fort.

66. **Amphispiza bilineata*, (Cass.)

Much more common in summer than winter. The nests are placed in low, thick bushes, rarely more than two feet from the ground. The eggs, when fresh, have a decided bluish tinge.—(SENNETT, B. Rio Grande, 18.—*Poospiza b.*, DRESSER, Ibis, 1865, 488.)

67. *Spizella socialis*, (Wils.)

April.—(DRESSER, Ibis, 1865, 489.—SENNETT, B. Rio Grande, 19.)

68. *Spizella pallida*, (Swains.)

Very abundant during the winter months, but I do not think that any remain to breed.—(DRESSER, Ibis, 1865, 489.—SENNETT, B. Rio Grande, 19.)

69. *Melospiza melodia*, (Wils.)

February and December.

70. *Melospiza lincolni*, (Aud.)

Very common in winter.—(DRESSER, Ibis, 1865, 489.—SENNETT, B. Rio Grande, 18.)

71. *Peucæa arizonæ*, Ridgw.*

Found in some abundance on a salt prairie about nine miles from Fort Brown, but obtained with difficulty, as they could rarely be flushed from among the tall grass. Its notes were frequently heard, and are quite pleasing. A nest found June 16, 1877, was placed among the roots of a tussock of grass: it was made of blades and stems of grasses, and was rather deep, but so frail that it fell to pieces on removal. The eggs, four in number, were quite fresh. They are unspotted white, strongly tinged with greenish-blue, and measure .82 by .63.

* The great variation in size and color between the set of eggs of *P. arizonæ* and those of *P. astivalis* appears to me to be inconsistent with their belonging to birds of the same species. In North American Birds, I speak of the color of *astivalis* as being a pure, almost brilliant, white, and their size .74 by .60. This is probably a little smaller than the average. An egg taken by Dr. Bryant in Florida measures .76 by .61. Three eggs, taken by Dr. Gerhardt in Northern Georgia, measure .80 by .62, .78 by .61, and .72 by .60. Their color is crystalline white, similar in brilliancy to the eggs of a Woodpecker. On the other hand, the four eggs of *P. arizonæ* measure .75 by .64, .83 by .64, .82 by .65, .80 by .62, averaging .82½ by .63¾, the average of *astivalis* being .77 by .61. The eggs of *P. cassini* have the same crystalline whiteness as those of *astivalis*, while those of *P. carpalis* correspond in color with those of *arizonæ*, and average .73 by .58. The color of the eggs of *P. arizonæ* is of a very light blue, with just a tinge of green, but to some eyes it appears to be a greenish-white.—T. M. B.

[Without specimens of this form in good plumage, it is quite impossible to determine the question of its relationship to *P. astivalis* by the skins alone. All the specimens I have seen are, unfortunately, in the greatly worn and faded midsummer plumage, and, though resembling examples of *P. astivalis* in corresponding dress, are easily distinguishable. Considering the latter fact, in connection with the radical difference in their eggs, as insisted on by Dr. Brewer, I think, upon the whole, that the bird may yet prove to be a distinct species.—R. R.]

72. *Peuceæa cassini*, (Woodh.)

Arrives about the middle of March, its sweet song attracting attention at once. Found in rather open chaparral, but usually keeping in thick bushes, where alone it permits a near approach. It usually sings while hidden in some bush, and, I think, rarely utters its notes on the wing unless the female is sitting. Its nest is difficult to find; three, taken April 28, and May 4 and 22, 1877, respectively, were placed at the foot of small bushes and scarcely raised from the ground. They were composed of dried grasses, lined with finer ones and a few hairs, but were very frail. Thirteen eggs taken from these nests are pure white, and average .74 by .57. Feet and legs are peculiarly light yellowish-white; bill pale horn-color, darker above; iris light hazel.—(DRESSER, Ibis, 1865, 489.—SENNETT, B. Rio Grande, 18.)

73. *Embernagra rufivirgata*, Lawr.

A common resident, frequenting thickets and brush-fences, and permitting a close approach. The only note I have heard, besides a *chip* of alarm, is a repeated *chip chip-chip*, begun slowly, but rapidly increasing till the notes run into each other. I have found the nests with eggs at intervals from May 9 to September 7. These are placed in low bushes, rarely more than three feet from the ground: the nests are rather large, composed of twigs and straws, and lined with finer straws and hairs; they are practically domed, the nests being placed rather obliquely, and the part above the entrance being somewhat built out. The eggs are from two to four in number: thirty-two average .88 by .65, the extremes being .97 by .67 and .81 by .61; they are pure white. Two, and probably three, broods are raised in a season.—(SENNETT, B. Rio Grande, 22.)

74. *Calamospiza bicolor*, (Townsend.)

Rather common during the winter months.—(DRESSER, Ibis, 1865, 490.)

75. *Euspiza americana*, (Gmel.)

Common during the spring migration of 1877.—(DRESSER, Ibis, 1865, 490.—SENNETT, B. Rio Grande, 19.)

76. **Guiraca cærulea*, (Linn.)

A rather common summer visitor, four or five pairs having nests in patches of tall weeds on the reservation.—(DRESSER, Ibis, 1865, 491.—*Goniaphea c.*, SENNETT, B. Rio Grande, 19.)

77. *Cyanospiza cyanea*, (Linn.)

Not rare in April and May.

78. *Cyanospiza versicolor*, (Bonap.)

First taken April 23, 1877. This beautiful species seems to be rather abundant in this vicinity, frequenting mesquite chaparral. Its song has some resemblance to that of the Indigo-bird, and is constantly uttered. I did not succeed in finding any nests.

79. *Cyanospiza ciris*, (Linn.)

A not uncommon summer visitor.—(DRESSER, Ibis, 1865, 491.—SENNETT, B. Rio Grande, 20.)

80. * *Spermophila moreleti*, (Puch.)

This curious little Sparrow is not uncommon during the summer months, and I am inclined to think that a few may pass the winter. During the breeding season the male has a very sprightly song, much resembling that of the Indigo-bird, but sweeter; this it frequently utters while perched on the topmost twig of a bush. They are usually seen in patches of briars and low bushes, at no great distance from water; they are very tame, and will permit a person to approach very closely. At least two pairs built within Fort Brown during the season of 1877. One of these nests, found nearly finished early in May, was in a bush about three feet from the ground: it was not pensile, but was placed on a small branch between three or four upright twigs, and was entirely composed of a peculiar yellow rootlet: it was destroyed by a violent storm before eggs were deposited. A second nest, found May 25, in a young ebony-bush, four feet from the ground, was deserted immediately after completion. It is a delicate little nest, supported at the rim and beneath by twigs, and built of a very fine, dried grass, with which a few horse-hairs, a leaf or two, and a small rag are interwoven: it is 1.70 wide by 1.50 in depth. Both these nests are open and transparent. It is worthy of remark that none of the males seen or killed here were in the typical adult plumage, but in that described by Mr. Lawrence as *S. albogularis*.

The stomachs of the specimens killed were filled with small seeds.

A third nest, found May 5, 1878, was attached to a hanging rim about four feet from the ground. The nest was partly pensile, and was built of delicate rootlets. It contained three young.

81. *Pyrhuloxia sinuata*, Bon.

Of this species I cannot say much. At times abundant, particularly in the spring, it often escaped observation for months; and though it probably breeds here, I was unable to find any nests. The birds are usually seen in thickets and about brush-fences, and females are more frequently seen than males.—(DRESSER, Ibis, 1865, 491.—SENNETT, B. Rio Grande, 21.)

82. * *Cardinalis virginianus*, (Briss.)

A common resident. Some summer specimens approach var. *coccineus* in the almost entire absence of grayish borders to the feathers of the back and rump.—(DRESSER, Ibis, 1865, 491.—SENNETT, B. Rio Grande, 21.)

83. *Eremophila alpestris* var. *chrysolæma*, (Wagl.)

Common during the winter months. I am confident that this species breeds rather plentifully on a prairie within ten miles of Fort Brown.

Many pairs were seen May 16 and June 2 and 16, 1877, though no nests were found.—(*E. cornuta*, DRESSER, Ibis, 1865, 486.—*E. alpestris chrysolama*, SENNETT, B. Rio Grande, 9.)

84. *Molothrus ater*, (Bodd.)

Very common during winter, arriving early in September and leaving in April. The males frequent the stables and picket-lines in large flocks, with three or four other species of Blackbirds: the females are much less common.—(*M. pectoris*, DRESSER, Ibis, 1865, 492.)

85. * *Molothrus ater* var. *obscurus*, (Gmel.)

Common during summer, replacing var. *pectoris* when it leaves. I have found the eggs or young in nests of *Pyrocephalus* var. *mexicanus*, *Vireo noveboracensis*, *Icteria virens*, *Amphispiza bilineata*, *Embernagra rufivirgata*, *Icterus cucullatus*, *I.* var. *affinis*, and *Agelaius phœniceus*.* Fifteen eggs now before me average .78 by .61, which is considerably larger than the measurements given by Dr. Brewer.†—(*M. ater obscurus*, SENNETT, B. Rio Grande, 22.)

86. * *Molothrus æneus*, (Wagl.)—The Red-eyed Cowbird.

a. æneus.

Psarocolius æneus, WAGL., Isis, 1829, 758.—BONAP., Consp. I, 1850, 426.

Molothrus æneus, CABAN., Mus. Hein. I, 1851, 192.—SCL., P. Z. S. 1856, 300; 1859, 365 (Jalapa), 381 (Oaxaca); Catal. 1861, 135, No. 819 (Jalapa).—SCL. & SALV., Ibis, 1860, 34; Nom. Neotr. 1873, 37.—OWEN, Ibis, 1861, 61 (Guatemala; descr. eggs).—CASS., Pr. Ac. Nat. Sci. Phil. 1866, 18 (Mazatlan, Manzanillo, and Jalapa, Mexico; Yucatan; Nicaragua; Costa Rica; Panama).—SUMICHR., Mem. Bost. Soc. I, 1869, 552 (Vera Cruz; hot and temperate regions. Vulg.: "*Tongonito*"; "*Emantecado*").—SALVIN, P. Z. S. 1870, 191 (Chitra and Calobre, Veragua).—LAWR., Ann. Lyc. N. Y. IX, 1868, 104 (Costa Rica); Mem. Bost. Soc. II, 1874, 281 (Mazatlan, Manzanillo Bay, and Mts. of Colima, W. Mexico. Habits); Bull. U. S. Nat. Mus. No. 4, 1876, 24 (Tapana, Isth. Tehuantepec: April.—"Iris red").—MERRILL, Bull. Nutt. Orn. Club, I, Nov. 1876, 88 (Ft. Brown, Texas; very abundant); *ib.* II, Oct. 1877, 85 (habits; descr. of eggs and young.—"Iris blood-red" in adult; brown in young).—COUES & SENNETT, Bull. U. S. Geol. and Geog. Surv. Terr. Feb. 1878, 23 (Fort Brown, Tex.—Syn., diag., remarks).

Molothrus robustus, CABAN., Mus. Hein. I, 1851, 193; J. f. O. 1861, 81.

β. armenti.

Molothrus armenti, CABAN., Mus. Hein. I, 1851, 192; J. f. O. 1861, 82.—CASS., P. A. N. S. March, 1866, 18 (Demarara; Savanilla, New Granada).

* On June 13, 1877, I found an egg of this variety in a nest of *Amphispiza bilineata* that contained three young and two addled eggs. The Cowbird's egg was cracked almost entirely across the middle, and in it was one of the addled Sparrow's eggs. This must have been done by some idle Mexican.

† Baird, Brewer, and Ridgway, North American Birds, ii, 157.

SP. CH.—*Adult male*: Head, neck, back, and lower parts soft, silky bronze-black, of a peculiar shade, having a brassy greenish-olive cast, much like the plumage of the body in *Quiscalus aneus*; the feathers violet-black immediately beneath the surface, the basal portion of the feathers slaty-grayish; scapulars and rump more violet; wings in general, tail-coverts, and tail lustrous silky steel-blue, the tail-coverts and upper wing-coverts more violaceous, the primaries and rectrices more greenish in certain lights; tibiae and anal region silky black; lining of the wings silky violet. Bill and feet deep black; *iris blood-red*. Wing, 4.60–4.80; tail, 3.70–3.80; culmen, .85–.90; tarsus, 1.15–1.25; middle toe, .85–.95. *Young male*: Uniform dull black, with a faint violet lustre on the back and rump, and a slight gloss of bottle-green on the wings and tail. *Adult female*: Uniform brownish-gray, darker above, where very faintly glossed with dull bluish, and paler beneath, many of the feathers of the wings and tail showing indistinctly paler edges, and feathers of the breast exceedingly indistinct darker shaft-streaks. Wing, 4.10; tail, 3.25; culmen, 0.75; tarsus, 1.05; middle toe, 0.85.

HAB.—Mexico and Central America, from the Rio Grande Valley (in the United States) to the Isthmus of Panama.

I have nothing of importance to add to the following notes, which appeared in the October (1877) number of the Bulletin of the Nuttall Ornithological Club, pp. 85–87:—

“The occurrence of this species north of Mexico was noted in the Bulletin of November, 1876 (Vol. I, p. 88). It is now more than a year since it was first observed, and during that time I have had ample opportunity to study its habits, a short account of which may be of interest. This Cowbird is found in Mexico, Guatemala, and Veragua, as well as in Southern Texas; how far it penetrates into the latter State I am unable to say. My first specimens were taken at Hidalgo, on the Rio Grande, seventy miles northwest of Fort Brown, where, however, they are not so abundant as lower down the river. Here they are common throughout the year, a small proportion going south in winter. Those that remain gather in large flocks with the Long-tailed Grackles, common Cowbirds, and Brewer’s, Red-winged, and Yellow-headed Blackbirds; they become very tame, and the abundance of food about the picket-lines attracts them for miles around. *M. aneus* is readily distinguishable in these mixed gatherings from the other species by its blood-red iris and its peculiar top-heavy appearance, caused by its habit of puffing out the feathers of the head and neck. This habit is most marked during the breeding season and in the male, but is seen throughout the year.

“About the middle of April the common Cowbird, Brewer’s, and Yellow-headed Blackbirds leave for the North; the Long-tailed Grackles have formed their colonies in favorite clumps of mesquite trees; the Redwings that remain to breed have selected sites for their nests; the dwarf Cowbirds (*Molothrus ater* var. *obscurus*) arrive from the South,

and *M. aeneus* gather in flocks by themselves, and wait for their victims to build. The males have now a variety of notes, somewhat resembling those of the common Cowbird, but more harsh. During the day they scatter over the surrounding country in little companies of one or two females and half a dozen males, returning at nightfall to the vicinity of the picket lines. While the females are feeding or resting in the shade of a bush, the males are eagerly paying their addresses by puffing out their feathers, as above noted, strutting up and down, and nodding and bowing in a very odd manner. Every now and then one of the males rises in the air, and, poising himself two or three feet above the female, flutters for a minute or two, following her if she moves away, and then descends to resume his puffing and bowing. This habit of fluttering in the air was what first attracted my attention to the species. In other respects their habits seem to be like those of the eastern Cowbird.

"My first egg of *M. aeneus* was taken May 14, 1877,[*] in a Cardinal's nest. A few days before this a soldier brought me a similar egg, saying he found it in a Scissor-tail's (*Milvulus*) nest; not recognizing it at the time, I paid little attention to him, and did not keep the egg. I soon found several others, and have taken in all twenty-two specimens the past season. All but two of these were found in nests of the Bullock's, Hooded, and small Orchard (*I. var. affinis*) Orioles. It is a curious fact that although Yellow-breasted Chats and Red-winged Blackbirds breed abundantly in places most frequented by these Cowbirds, I have but once found the latter's egg in a Chat's nest, and never in a Red-wing's, though I have looked in very many of them.[†] Perhaps they feel that the line should be drawn somewhere, and select their cousins the Blackbirds as coming within it; the Dwarf Cowbirds are not troubled by this scruple, however. Several of these parasitic eggs were found under interesting conditions. On six occasions I have found an egg of both Cowbirds in the same nest; in four of these there were eggs of the rightful owner,‡ who was sitting; in the other two the Cowbirds' eggs were alone in the nests, which were deserted: but I have known the Hooded Oriole to sit on an egg of *M. aeneus* which was on the point of hatching when found; how its own disappeared I cannot say. Once two eggs of *aeneus* were found in a nest of the small Orchard Oriole (*var. affinis*). Twice I have seen a broken egg of *aeneus* under nests of Bullock's Oriole on which the owner was sitting.

"Early in June a nest of the Hooded Oriole was found with four eggs and one of *M. aeneus*, all of which I removed, leaving the nest. Happening to pass by it a few days later, I looked in, and to my surprise found two eggs of *aeneus*, which were taken: these were so unlike that

* In the Bulletin misprinted 1876.

† Since writing this, I have found this Cowbird's egg in a deserted Redwing's nest.

‡ "It would be interesting to know what would have become of the three species in one nest, and had the latter been near the fort, where I could have visited them daily, I should not have taken the eggs. It is probable, however, that *M. aeneus* would have disposed of the young Dwarf Cowbird as easily as of the young Orioles."

they were probably laid by different birds. Still another egg, and the last, was laid in the same nest within ten days. But the most remarkable instance was a nest of the small Orchard Oriole found June 20, containing three eggs of *æneus*, while just beneath it was a whole egg of this parasite, also a broken one of this and of the Dwarf Cowbird. Two of the eggs in the nest were rotten; the third, strange to say, contained a living embryo. As the nest was certainly deserted, I can only account for this by supposing that the two rotten ones were laid about the first week of June, when there was considerable rain, and that the other was deposited soon after, since which time the weather had been clear and very hot. On one occasion I found a female *æneus* hanging with a stout thread around her neck to a nest of the Bullock's Oriole. The nest contained one young one of this Cowbird, and it is probable that its parent, after depositing the egg, was entangled in the thread on hurriedly leaving the nest, and then died; it had apparently been dead about two weeks. This case supports the view that the eggs or young of the owner are thrown out by the young parasite, and not removed by its parent, though I could find no trace of them beneath this nest.

"Twenty-two eggs of *M. æneus* average .90 by .70, the extremes being .95 by .75 and .82 by .65. The color is a greenish white, unspotted, soon fading to a dull opaque white. There is more than the usual variation in shape. Some are almost perfectly elliptical, others are nearly round; some are quite pointed at the smaller end, while others still are there abruptly truncate.

"The young, soon after leaving the nest, have the plumage uniform dull black; cheeks and sides of head bare; iris brown."*

87. * *Agelæus phœniceus*, (Linn.)

A common resident, breeding abundantly. The nests and eggs are smaller than the average of those found in more Northern States.—(DRESSER, *Ibis*, 1865, 492.—SENNETT, *B. Rio Grande*, 24.)

88. *Xanthocephalus icterocephalus*, (Bonap.)

Rather rare during winter, and I do not think that any breed, in this immediate vicinity at least.—(DRESSER, *Ibis*, 1865, 492.—SENNETT, *B. Rio Grande*, 24.)

89. * *Sturnella magna*, (Linn.)

Common during winter.—(SENNETT, *B. Rio Grande*, 24.)

*In the *Ibis* of January, 1861, pp. 61, 62, are the following notes by R. Owen on the supposed eggs of this species:—"The eggs are pale greenish white, and measure, axis 1 inch, diam. .75. A few eggs of the 'Tordito', taken from the nests of the 'Chorcha' (*Icterus*) and the 'Cien-Sante Mejicano' (*Mimus gracilis*). The Indians here all identify these eggs as those of the 'Tordito'. However, personally, I have never surprised the bird on the nest of any other species. At the same time I may add that I have never seen it either building or occupied in any other domestic occupation whatever, which somewhat confirms the statement aforesaid. The eggs are found most commonly in the nests of the 'Chorcha' and the 'Cien-Sante Mejicano', and occasionally in that of the largest species of 'Chatillo' (*Pitangus derbianus*)."—T. M. B.

90. *Sturnella magna* var. *mexicana*, ScL.

"*Sturnella magna*", SWAINS., Philos. Mag. I, 1827, 436.

"*Sturnella hippocrepis*", SCL., P. Z. S. 1856, 30, 301; 1859, 58, 365, 381.—SCL. & SALV., Ibis, 1859, 19; 1860, 34.—LAWR., Ann. Lyc. N. Y. VIII, 1865, 177 (David, Veragua).

Sturnella mexicana, SCL., Ibis, 1861, 179; P. Z. S. 1864, 175 (City of Mexico); Catal. 1861, 139, No. 842 (Jalapa).—CASS., Proc. Ac. Nat. Sci. Phila. 1866, 24 (Mexico; Guatemala).—SALVIN, P. Z. S. 1867, 142 (Veragua).

"*Sturnella ludoviciana*", SALV., P. Z. S. 1870, 191 (Veragua).

Sturnella magna var. *mexicana*, B. B. & R., Hist. N. Am. B. H, 1874, 172 (Mexico; Central Am.).—LAWR., Bull. U. S. Nat. Mus. No. 4, 1876, 24 (Barris and Sta. Efigenia, Isth. Tehuantepec; Sept., Feb.).

Sturnella magna, a. *mexicana*, COUES, Birds N. W. 1874, 190.

Summer specimens of the Meadow Lark found at Fort Brown have been identified by Mr. Ridgway as typical *mexicana*. Its notes and habits, as observed there, do not seem to differ essentially from those of *S. magna*. It is abundant from April until October.

[This Southern form may be easily distinguished from true *magna* by its smaller general size (including the bill) and much larger legs and feet, which are not only relatively, but absolutely, longer and stouter than in *S. magna*. The two specimens examined by me were obtained at Fort Brown, August 21 and September 13, 1877. They agree exactly with Mexican examples.—R. R.]

91. *Icterus auduboni*, Girard.

This fine Oriole is found in moderate abundance, and is the only species that is resident. During the summer months, it is usually found in deep woods at some distance from houses, but during the winter it is less shy and retiring. They are frequently captured and offered for sale by Mexicans in this vicinity, but several I have kept would not sing at all in captivity. When free, their usual song is a prolonged and repeated whistle of extraordinary mellowness and sweetness, each note varying in pitch from the preceding. If once heard, it can never be forgotten. I have not succeeded in finding any nests. There is considerable variation in the extent of white edging to the wings and tail, some specimens closely approaching var. *melanocephalus*.—(SENNETT, B. Rio Grande, 26.)

92. *Icterus cucullatus*, Swains.

This is perhaps the most common Oriole in this vicinity during the summer, arriving about the last week in March. It is less familiar than Bullock's Oriole, and, like the preceding species, is usually found in woods. The nests of this bird found here are perfectly characteristic, and cannot be confounded with those of any allied species; they are usually found in one of the two following situations: the first and most frequent is in a bunch of hanging moss, usually at no great height from the ground; when so placed, the nests are formed almost entirely by hollowing out and matting the moss, with a few filaments of a dark hair-like moss as lining; the second situation is in a bush (the name of

which I do not know) growing to a height of about six feet, a nearly bare stem throwing out two or three irregular masses of leaves at the top; these bunches of dark green leaves conceal the nest admirably; it is constructed of filaments of the hair-like moss just referred to, with a little Spanish moss, wool, or a few feathers for the lining; they are rather wide and shallow for Orioles' nests, and, though strong, they appear thin and delicate. A few pairs build in Spanish bayonets (*Yucca*) growing on sand ridges in the salt prairies; here the nests are built chiefly of the dry, tough fibres of the plant, with a little wool or thistle-down as lining; they are placed among the dead and depressed leaves, two or three of which are used as supports. A large series of eggs now before me are quite characteristic, and can readily be distinguished from eggs of our other Orioles by the absence of irregular blotches and pen-marks and by the white or very slightly bluish ground-color. The markings are chiefly at the larger end in an irregular ring of spots of varying shades of brown and lilac. Some sets are precisely like large Vireos' eggs. The average size is .82 by .59, with comparatively little variation.—(SENNETT, B. Rio Grande, 25.)

93. * *Icterus bullocki*, Swains.

Common summer visitant. The breeding habits of this bird are quite unlike those of the Hooded Oriole. Instead of concealing its nest admirably in bunches of leaves or hanging moss, it is conspicuously placed at the extremity of an upper branch of a mesquite or ratama tree, usually at the edge of a prairie or near houses. One set of eggs has the ground-color a beautiful pinkish buff.—(SENNETT, B. Rio Grande, 25.)

94. *Icterus baltimore*, (Linn.)

Two specimens taken in April. I think that Mr. Dresser is in error in stating in the *Ibis* that this Oriole breeds at Matamoras.—(DRESSER, *Ibis*, 1865, 493.)

95. * *Icterus spurius* var. *affinis*, Lawr.

This small race of the Orchard Oriole is found rather plentifully from the latter part of March until August. Nests found here are much smaller than Eastern ones; in size and shape, they are more like Vireos'. This species and Bullock's are frequently found breeding in small, irregular colonies composed of both species; the Hooded Oriole does the same, but with individuals of its own species only.—(DRESSER, *Ibis*, 1865, 493.—SENNETT, B. Rio Grande, 25.)

96. *Scolecophagus cyanocephalus*, (Wagl.)

Brewer's Blackbird is very abundant from about the first week in October until April.—(DRESSER, *Ibis*, 1865, 493.—SENNETT, B. Rio Grande, 27.)

97. * *Quiscalus macrurus*, Swains.

This handsome Grackle is a very common resident, and large numbers

breed on the reservation. Early in April, after several weeks of noisy courtship, they begin to build in irregular colonies, and by the middle of the month have eggs. The nests are perhaps most frequently placed near the top of one of the main upright branches of a young mesquite-tree. They are strongly built of straws, leaves, and grasses, mud being used freely. Where Spanish moss is plentiful, the nests are sometimes composed entirely of it, and I have found them among tule-reeds where several species of Herons were breeding. I have also found their nests either supported by the lower part of the nest of the Caracara Eagle or in the same tree. The eggs, usually three in number, vary greatly in appearance; the ground-color is usually a greenish white or purplish-brown, more or less heavily spotted and dashed with several shades of brown and black. These markings are apt to be heavier at the smaller end, which frequently has a much darker ground-color than the larger; and this is so often the case as to be rather characteristic. Forty-five eggs now before me give the following measurements:—average, 1.26 by .85; largest, 1.44 by .91; smallest, 1.16 by .82. The annual moult takes place in August. Unlike the Boat-tailed Grackle, the males of this race do not leave the females while incubating, but are jealous of intruders, and take their share of feeding the young. The various notes of this bird are quite indescribable, and must be heard to be appreciated. The long and heavy tail of this Grackle makes it easily recognizable at a long distance, but is rather inconvenient when there is much wind. At such times, the birds are obliged to “head up” wind, like so many sloops at anchor. They have a frequent and curious habit of throwing their heads up and far back, so that the reversed bill is almost parallel with the back.—(DRESSER, *Ibis*, 1865, 493.—SENNETT, B. Rio Grande, 27.)

98. *Xanthura luxuosa*, Less.

The Rio Grande Jay is a common resident about Fort Brown and higher up the river, but does not seem to pass much into the interior of Texas. It is a noisy and gaudy species, soon making its presence known by its harsh cries or by its green and yellow plumage, seen for a moment as it moves about. Though at times shy, it is often very tame and bold, entering tents and taking food off plates or from the kitchen whenever a good opportunity offers. Large numbers are caught by the soldiers in traps baited with corn, but the plumage is their only attraction as a cage-bird. Its eggs and nest were first described in vol. i, p. 89, of the Bulletin of the Nuttall Ornithological Club. Since that time, I have found several other nests, but they do not affect the statements above made in regard to their breeding habits.—(DRESSER, *Ibis*, 1865, 495.—SENNETT, B. Rio Grande, 29.)

99. *Sayornis fuscus*, Gmel.

Not uncommon from October until April.—(DRESSER, *Ibis*, 1865, 473.)

100. *Sayornis sayus*, Bonap.

More abundant than the preceding during the winter months.—(DRESSER, *Ibis*, 1865, 473.)

101. *Contopus borealis*, (Swains.)

Not rare during the migrations.—(DRESSER, Ibis, 1865, 474.)

102. *Contopus virens*, (Linn.)

Breeds; a few pass the winter.—(DRESSER, Ibis, 1865, 474.—SENNETT, B. Rio Grande, 33.)

103. *Contopus richardsoni*, (Swains.)

August.—(DRESSER, Ibis, 1865, 474.)

104. *Empidonax minimus*, Baird.

September.—(DRESSER, Ibis, 1865, 474.—SENNETT, B. Rio Grande, 33.)

105. *Empidonax acadicus*, (Gmel.)

Two specimens taken in the spring.—(DRESSER, Ibis, 1865, 475.)

106. *Empidonax pusillus* var. *trailli*, (Aud.)

August 7, 1876.—(*E. trailli*, DRESSER, Ibis, 1865, 474.)

107. *Empidonax flaviventris*, Baird.

A single specimen taken.—(DRESSER, Ibis, 1865, 475.)

108. *Tyrannus carolinensis*, (Gmel.)

Rather common during the migrations, arriving about the first week in April and September.—(DRESSER, Ibis, 1865, 472.—SENNETT, B. Rio Grande, 31.)

109. * *Milvulus forficatus*, (Gmel.)

Common summer visitor, arriving about March 20 and leaving in September and October. Several pairs of this exquisite Flycatcher build in the low trees surrounding the parade-ground of the fort. The nests resemble those of the Kingbird, but are smaller, and, as a rule, are not more than six or seven feet from the ground. The eggs are from three to five in number, and are deposited by the latter part of April. The annual moult takes place in July and August. About the middle of October, 1876, just before sunset, a flock of at least one hundred and fifty of these birds passed over the fort: they were flying leisurely southward, constantly pausing to catch passing insects; and in the rays of the setting sun their salmon-colored sides seemed bright crimson.—(DRESSER, Ibis, 1865, 472.)

110. *Myiarchus crinitus*, (Linn.)

Taken in March and April. I am confident that none of this variety remain to breed.—(DRESSER, Ibis, 1865, 473.—SENNETT, B. Rio Grande, 32.)

111. *Myiarchus erythrocerus* var. *cooperi*.

? *Tyrannus cooperi*, KAUP,* P. Z. S. Feb. 11, 1851, 51 ("Northern America and Chili").

Myiarchus cooperi, BAIRD, Birds N. Am. 1858, 180; Catal. N. Am. B. 1859, No. 132.—SCL., P. Z. S. 1859, 384; Catal. 1861, 232, No. 1428 (Mexico; Guatemala).—SCL. & SALV., Ibis, 1859, 122, 440; 1870, 837 (coast Honduras).—LAWR., Ann. Lyc. N. Y. ix, 1869, 202 (Yucatan).

Myiarchus crinitus, c. var. *cooperi*, COUES, P. A. N. S. July 2, 1872, 67 (Tehuantepec, Mazatlan, and Guadalajara, S. W. Mexico; Guatemala?).

Myiarchus crinitus var. *cooperi*, B. B. & R., Hist. N. Am. B. II, 1874, 331 (Mazatlan, Tehuantepec, and Yucatan).—LAWR., Bull. U. S. Nat. Mus. No. 4, 1876, 28 (Tapania and Sta. Efigenia, Isth. Tehuantepec; April; Dec.).

? *Tyrannus mexicanus*, KAUP,† P. Z. S. Feb. 11, 1851, 51 (*loc. incog.*).

Myiarchus mexicanus, LAWY., Ann. Lyc. N. Y. IX, 1869, 202 (Yucatan); Pr. Boston Soc. June 7, 1871 (Tres Marias Islands, W. Mexico).—SUMICHR., Mem. Boston Soc. I, 1869, 557, 560 (Vera Cruz; hot region).

Myiarchus yucatanensis, LAWY., P. A. N. S. Nov. 21, 1871, 235 (Yucatan, Mus. G. N. L.—*M. mexicanus*, Ann. Lyc. N. Y. IX, 1869, 202!).

Myiarchus crinitus erythrocerus, COUES & SENNETT, Bull. U. S. Geol. and Geog. Surv. Terr. vol. iv, No. 1, Feb. 1878, 32 (Ft. Brown, Texas).

Alguacil de Moscas, Tres Marias vernac. (*vide* LAWY., *l. c.*).

The occurrence of this variety within our limits was noted in the April (1878) number of the Bulletin of the Nuttall Ornithological Club. Since that time I have paid particular attention to the species, and find that it is the only one of the genus that breeds on the Lower Rio Grande, which it does in considerable numbers. In its notes and habits, it appears to closely resemble the *M. crinitus*. Seven identified sets of thirty-two eggs average .93 by .66, the extremes being 1.03 by .73 and .82 by .65. With one exception, no snake-skins were used in the construction of any of these nests. They were composed of felted locks of wool and hairs, and were placed not far from the ground, either in old Woodpeckers' holes or in natural hollows in decayed trees or stumps.

NOTE.—The eggs of the *Myiarchus*, as a genus, have a very remarkable family resemblance. They are of a rounded-oval shape, in some instances the relation of the axis to the diameter being as $8\frac{1}{2}$ to $7\frac{1}{2}$, and averaging about $8\frac{1}{2}$ to 7. The ground-color varies from a light buff to a dark cream-color; over these are distributed two sets of markings, all of them having a longitudinal direction, often narrow lines, leaving broad, unmarked spaces between them, and not unfrequently expand-

* "With shorter wings than *mexicana*, but with longer bill, like *crinita*; throat and over breast light gray, not so dark as in *crinita*; the black stripe along the inner webs of the tail-feathers is broader, like *stolidus*." [Type in Brit. Mus.]

† "With short wings; all the wing-feathers, except the first, with rufous margins; breast light ash-gray; above lighter." [Type in Brit. Mus.]

ing into broad and confluent patches about the larger end. This genus is represented in my collection by the present species, and *M. crinitus*, *M. mexicanus*, *M. cooperi*, and *M. validus*, of Jamaica. In all these, except the last, the two very distinct colorations are more or less noticeable: these are a deep shade of reddish-brown and a lighter marking of dark stone-color or slate, with slight tinge of purple or lilac. In the *Myiarchus crinitus*, the dark brown is the predominant color; in *M. erythrocerus*, the stone-colored markings are much more abundant than in any of the others; in *M. validus*, on the contrary, these are wholly wanting. The set of eggs identified by Dr. Merrill, five in number, range from .99 to .94 of an inch in length and from .69 to .74 in breadth, averaging .97 by .72½. Another set of three, not identified, but undoubted, average 1.02 by .72. A third set, from the collection of the late Dr. Berlandier, and hitherto supposed to belong to *M. mexicanus*, are marked with stone-colored dashes that are much darker and have a decidedly purplish tinge. These average .95 by .74.

A set of five eggs, from California, of *M. mexicanus*, average .84 by .69, and another set .84 by .68. In these, the markings of both kinds are fewer, and the greater part of these in slender lines, the purplish-slate being about as abundant as the reddish-brown stripes. Five eggs of *M. crinitus* average .95 by .71¾, are deeply marked, and chiefly with the brown stripes. The eggs of *M. cooperi* average .91½ by .73, and are very similar to those of *M. mexicanus*, except in size. The egg of *M. validus* is marked by but one kind of colored stripe, a combination of lilac and red-brown. The ground-color is more distinctly a deep and warm shade of cream: measurement, .84 by .69.—T. M. B.

NOTE BY R. R.—The proper name of this species has been a subject of much discussion and difference of opinion, but it seems now generally settled that it is to be known as *erythrocerus*, ScL. & Salv. Admitting that two races may be distinguished (a smaller Southern, and a larger Northern, with grayer colors), it is less easy to decide what name the Northern race should bear,—the Southern one being, of course, the typical *erythrocerus*. As to point of date, the choice evidently lies between *Tyrannula mexicana* and *T. cooperi* (1857), both these names first occurring on the same page, but *mexicana* first, and therefore entitled to priority. The difficulty is that neither of the brief diagnoses accompanying these names give any character of even the least importance, and are therefore no aid whatever in determining what species is meant. The types of both these birds are said to exist in the British Museum; and Dr. P. L. Selater, who has examined that of *T. mexicana*, says that it is the same as the bird called *M. cooperi* (Kaup) by Professor Baird, in *Birds N. Am.* 1858, 180. If this be true, it raises the question as to whether Professor Baird's identification of Kaup's *T. cooperi* was correct, since it seems strange that the latter author would, on the same page, describe different specimens of the same bird as distinct species! It

seems to be generally conceded, however, that Professor Baird was right in this determination; therefore, as Dr. Coues surmises (Pr. Ac. Nat. Sci. Phila. 1872, p. 68), *Tyrannula mexicana*, Kaup, and *T. cooperi*, Kaup, must have been based upon variations of one species—the one under consideration!

In attempting to determine to which of the two forms of the species Dr. Merrill's specimens belonged, I found it necessary to carefully examine all the material available. This consisted of twenty-four specimens, belonging chiefly to the collection of the National Museum. After taking careful measurements of every specimen, and submitting all to the closest scrutiny and comparison, I found myself forced to a conclusion different from that reached by Dr. Coues (see Bull. U. S. Geol. and Geog. Surv. Terr. IV, No. 1, pp. 32, 33), in whose opinion regarding the matter I had previously coincided. I now find, that (1) while extreme examples of var. *cooperi* are astonishingly different from *erythrocerus* proper, such individuals form a very small proportion of the whole, and are chiefly from Western and Southwestern Mexico, where several other species of birds, notably *Pyrranga aestiva* (var. *cooperi*, Ridgw.), attain the same great development of the bill (and, in fact, all the measurements); that (2) nearly all specimens from Mexico and Guatemala should be referred to *cooperi*, examples referable to *erythrocerus* on account of dimensions and shades of color being comparatively rare. Besides averaging larger than var. *erythrocerus*, var. *cooperi* has usually a grayer cast of plumage, in this respect corresponding to the Mexican race of *Tyrannus melancholicus* (var. *couchi*, Baird), *Myiarchus lawrencii*, and numerous other birds of similar geographical distribution. The only satisfactory test, however, which I have been able to apply in determining to which race doubtful specimens should be referred is that of size, as follows:—

Var. ERYTHROCERCUS.—Wing, 3.40–3.95 (average, 3.77); tail, 3.60–4.00 (average, 3.82); bill, from nostril, .55–.68 (average, .61); tarsus, .85–.88 (average, .86).* *Hab.*—Eastern Tropical America, from Paraguay to Southern Mexico, but chiefly southward of the latter country.

Var. COOPERI.—Wing, 3.85–4.45 (average, 4.15); tail, 4.00–4.60 (average, 4.25); bill, from nostril, .60–.82 (average, .69); tarsus, .88–.95 (av-

* Six specimens, as follows:—

Museum No.	Sex and age.	Museum.	Locality.	Date.	Wing.	Tail.	Bill from nostril.	Tarsus.
16348	♀ ad.	U. S.	"Brazil"	Aug. 1, 1859	3.65	3.60	.58	.85
16349	♂ ad.	U. S.	Paraguay	May 1, 1859	3.75	3.80	.60	.85
29423	♂ ad.	U. S.	Costa Rica		3.90	3.80	.62	.88
39210	♂ ad.	U. S.	Merida, Yucatan	May 29, 1865	3.95	3.95	.63	.85
39213	♂ ad.	U. S.	do	Apr. 9, 1865	3.49	3.75	.55	.82
57649	♂ ad.	U. S.	Sta. Etigenia, Tehuantepec	Dec. 18, 1868	3.95	4.00	.65	.85

erage, 92).* *Hab.*—Mexico (including Lower Rio Grande Valley in Texas) and Guatemala.

The principal references to var. *erythrocerus* are the following:—

?*Tyrannula irribilis*, BONAP., Consp. I, 1850, 189. Supposed to belong here from quotation of Azara. "South America." Not *Tyrannus irribilis*, Vieill.!

Myiarchus crinitus, b. var. *irribilis*, COUES, P. A. N. S. July 2, 1872, 65 (Central and South America, Paraguay, Rio Parana, Bahia, Venezuela, Yncatan, Guatemala, Costa Rica).

Myiarchus crinitus var. *irribilis*, B. B. & R., Hist. N. Am. B. II, 1874, 331 (Paraguay to Costa Rica).

Myiarchus erythrocerus, SCL. & SALV., P. Z. S. 1868, 631, 632 (Venezuela); Nom. Neotr. 1873, 52.—?SEMPER, P. Z. S. 1871, 271 (Sta. Lucia, W. I.); 1872, 650.

Pyrocephalus erythrocerus, GRAY, Hand-list, I, 1869, No. 5522 (s. g. *Myiounax*. Quotes "*crinitus*, p., Hartl.; *irribilis*, p., Bp.; *ferox* ♂, Burm.").

Pipperie gran-bois, St. Croix vernac. (*vide* SEMPER, l. c.).

112. *Myiarchus cinerascens*, LAWY.

Only two specimens of this variety were taken.—(*M. mexicanus*, DRESSER, Ibis, 1865, 473.)

113. *Pyrocephalus rubineus* var. *mexicanus*, SELAT.

Resident, but more abundant in summer than in winter. During the breeding season, the male frequently utters a peculiar twittering song while poised in the air about thirty feet from the ground; during the song, it frequently snaps its bill as if catching insects. Its note of anger and alarm is a mew. Except during the breeding season, the birds are decidedly shy. The nests are usually placed upon horizontal forks of ratama-trees, growing upon the edge of a prairie, and rarely more than six feet from the ground. They bear considerable resemblance to nests of the Wood Pewee in appearance and in the manner in which they are saddled to the limb; the bottoms are made of small twigs, over which

* Eighteen specimens, as follows:—

Museum No.	Sex and age.	Museum.	Locality.	Date.	Wing.	Tail.	Bill from nostril.	Tarsus.
9100	— ad.	U. S.	"Mexico" (<i>M. cooperi</i> , Baird, B. N. Am.)	.....	4.10	4.00	.69	.90
29690	— ad.	U. S.	Mexico	.....	4.05	4.05	.62	.88
37364	— ad.	U. S.	Tres Marias, Western Mexico	Jan. —, 1865	4.10	4.20	.70	.93
52510	ad.	U. S.	Mazatlan, Mexico	.....	4.30	4.20	.70	.95
1182	ad.	R. R.	do	.....	4.30	4.40	.72	.95
4297	ad.	R. R.	Tehuantepec, Southern Mexico	Dec. 18, 1868	4.05	4.05	.65	.92
—	ad.	R. R.	do	Dec. 24, 1868	4.00	4.25	.75	.92
57640	ad.	U. S.	do	Dec. 16, 1868	4.25	4.55	.60	.90
58844	ad.	U. S.	do	May 5, 1869	3.85	4.00	.72	.88
58845	ad.	U. S.	do	Apr. 27, 1869	4.10	4.30	.68	.92
59617	ad.	U. S.	do	Oct. 8, 1869	4.15	4.25	.68	.88
73631	ad.	U. S.	do	Apr. 11, 1871	4.10	4.20	.68	.95
73632	ad.	U. S.	do	May 27, 1871	4.40	4.60	.75	.95
73633	ad.	U. S.	do	May 27, 1871	4.05	4.15	.73	.98
42337	ad.	U. S.	Guadalajara, Southern Mexico	.....	4.45	4.60	.82	.95
71138	ad.	U. S.	Fort Brown, Texas	May 10, 1877	4.05	4.20	.65	.90
73622	ad.	U. S.	do	Apr. 1, 1876	.....	.....	.....	.....
49312	— ad.	U. S.	Central Guatemala	.....	4.15	4.15	.62	.90

are various soft materials felted together; a few hairs or a little wool form the lining; the rims are covered with lichens; the cavity is slight, varying from .8 to 1.25 inch in depth by 2 in width, and the whole structure is easily overlooked. The usual number of eggs is three; the ground-color is a rich creamy-white, with a ring of large brown and lilac blotches at the larger end. Fourteen eggs now before me average .73 by .54. A nest of this species, found May 19, 1877, contained a young Dwarf Cowbird and three addled eggs, which latter I removed. On revisiting the same nest ten days later, I found three fresh eggs, on which the female was sitting. As the young Cowbird could not have been fledged by this time, it would seem as if the Flycatchers, on finding that their eggs had been removed, had thrown out the parasite and laid again.—(*P. rubineus*, DRESSER, Ibis, 1865, 475.—*P. rubineus mexicanus*, SENNETT, B. Rio Grande, 34.)

114. *Ceryle alcyon*, (Linn.)

Not common from October until April.—(DRESSER, Ibis, 1865, 471.—SENNETT, B. Rio Grande, 36.)

115. *Ceryle americana* var. *cabanisi*, (Tschudi.)

Two specimens, obtained in May and October respectively. The scarcity of Kingfishers on the lower Rio Grande is doubtless due to the muddy water, that renders it difficult for them so see their prey.—(*C. americana*, DRESSER, Ibis, 1865, 472.)

Genus NYCTIDROMUS, Gould.

Nyctidromus, GOULD, Icon. Av. II, 1838. (Type, *N. derbyanus*, Gould.)—GRAY, List Genera B. ed. 2, 1841, 10; Gen. and Subg. 1855, 11; Hand-list, I, 1869, 60.—GRAY & MITCH., Genera B. I, 1849, 48.—CASSIN, P. A. N. S. 1851, 179.—SCL., P. Z. S. 1866, 144.—SCL. & SALV., Nomi. Neotr. 1873, 97.—BOUCARD, Cat. Av. 1876, No. 2291.

Eucapripodus, LESSON, 1843 (*vide* GRAY).

Lucapripodus, LESSON, 1847 (*vide* GRAY).

CH.—Similar to "*Antrostomus*", but having the tarsus longer than the middle toe, and completely naked; the tail about equal to the lengthened wing (instead very much shorter), and the third instead of the second primary longest; lateral toes less than half as long as the middle toe, including the claw.

The characters given above are all that I am able to discover as distinguishing the present form from the species referred by most writers to the so-called genus *Antrostomus*, Gould. After very careful comparisons of species of true *Caprimulgus* (as restricted) with those of the so-called genera *Antrostomus* and *Stenopsis*, I am at a loss to find characters of generic importance between them. *A. carolinensis*, the type of the former genus, differs, it is true, from all the others in possessing lateral filaments to the rectal bristles, while *A. nuttalli* is aberrant in other respects. There is such a difference in the details of form between almost every two species, however, that it is seriously questionable

whether they should not all be included under *Caprimulgus*. The only alternative seems to be a further subdivision of one or more of the so-called genera, especially "*Antrostomus*", leaving *A. carolinensis* as the typical and only species, referring *A. vociferus* to *Caprimulgus*, and instituting a new genus for *A. nuttalli*. The following scheme may serve to show the nature of the differences between the three North American species usually included in *Antrostomus* and the genus *Nyctidromus*:—

A.—Tarsus feathered in front almost to the toes, and shorter than the middle toe; first quill longer than the fourth.

1. CAPRIMULGUS.—Rictal bristles without lateral filaments. Sexes with the tail differently marked. Tail rounded. (Including *C. vociferus*.)
2. "ANTROSTOMUS."—Rictal bristles with fine lateral filaments. Sexes with the tail differently marked. Tail rounded. (Including only the type, *A. carolinensis*.)

B.—Tarsus entirely naked in front, and longer than the middle toe; first quill shorter than the fourth.

- 3.—Tail even, much shorter than the wing. Sexes with the tail not differently marked. Plumage with a peculiarly soft, velvety surface. (*C. nuttalli* only.)
4. NYCTIDROMUS.—Tail rounded, equal to the wing. Sexes with the tail differently marked.

116. * *Nyctidromus albicollis*.—Pauraque Goatsucker.

Montroyan de la Guyane, BUFF., Hist. Nat. des Ois. VI, 1779, 549.

Crepaud-volant ou Tette-Chevre roux, de la Guiane, BUFF., Pl. Enl. 733 (= ♀).

White-throated Goatsucker, LATH., Synop. II, pt. ii, 1785, 596, No. 7.

Guiana Goatsucker, LATH., t. c. 598, No. 9.

Caprimulgus albicollis, GMEL., S. N. I, ii, 1788, 1030 (ex LATH., l. c.).—LATH., Ind. Orn. II, 1790, 575, No. 7.—VIEILL., Enc. Méth. 1823, 536, No. 4.—LICHT., Verz. Doubl. 1823, 59, 606.—D'ORB., Guerin's Mag. 1837, 67.—HARTL., Ind. Azara, 1847, 20, 310.—D'ORB. & LAFR., Rev. Zool. 1837, 67.—CABAN., in SCHOMB. Guiana, III, 1848, 710, No. 204.

Nyctidromus albicollis, BURM., Th. Bras. II, 1856, 389, No. 1.—SCL., P. Z. S. 1866, 124 (fig. of bones of foot), 144 (S. Mexico to S. Brazil).—SCL. & SALV., *ib.* 193 (Ucayali, E. Peru); 1867, 752 (Huallaga, E. Peru), 978 (Upper Amazon); 1869, 252 (Marurira, Venezuela), 598 (Conispata, Peru); 1870, 782 (S. of Merida, Venezuela), 837 (coast of Honduras); 1873, 186 (Peru), 290 (E. Peru); 1875, 237 (Venezuela); Nom. Neotr. 1873, 97 (Central America; S. Am. to Brazil).—LAWR., Ann. Lye. N. Y. IX, 1869, 204 (Yucatan); Pr. Boston Soc. 1871, — (Tres Marias Islands, W. Mexico; common); Mem. Boston Soc. II, 1874, 291 (Mazatlan, Colima, and Tres Marias, W. Mexico); Bull. U. S. Nat. Mus. No. 4, 1876, 31 (Isth. Tehuantepec).—WYATT, Ibis, 1871, 375 (L. Paturia, New Granada).—LEE, Ibis, 1873, 134 (Buenos Ayres).—LAYARD, *ib.* 389 (Pará).—MERRILL, Bull. Nutt. Orn. Club, I, Nov. 1876, 88 (Fort Brown, Texas, April and May; not rare; breeding).

Caprimulgus guianensis, GMEL., S. N. I, ii, 1788, 1030 (based on BUFF., Pl. Enl. 733).—LATH., Ind. Orn. II, 1790, 586, No. 8.—MAX. Beitr. III, 1831, 318, No. 4.

Nyctidromus guianensis, CASS., P. A. N. S. 1851, 183, 189 (Cayenne; Surinam); Catal. Caprim. Mus. Phila. Acad. 1851, 12.—BURM., Syst. Ueb. II, 1856, 391.—SCL., Catal. Am. B. 1862, 281, No. 1690 (Orizaba; Bogota; Vera Paz; Esmeraldas, Ecuador; Trinidad); P. Z. S. 1864, 176 (City of Mexico).—TAYLOR, Ibis, 1864, 90 (Trinidad).—LAWR., Ann. Lye. N. Y. VII, 1861, 290 (Isth. Panama).—SCL. & SALV., P. Z. S. 1864, 364 (Isth. Panama).—PELZ., Orn. Bras. 1871, 13.—SALVIN, P. Z. S. 1870, 204 (Veragua).

Ibiyau, AZARA, Apunt. 1801, No. 310.

Nyctidromus americanus, CASSIN, Pr. A. N. S. 1851, 179, 180; Catal. Caprim. Mus. Phila. Acad. 1851, 12 (Nicaragua).—SCL., P. Z. S. 1856, 285; 1859, 367 (Jalapa, E. Mexico).—SCL. & SALV., Ibis, 1859, 125, 173 (Guatemala).—CABAN. & HEINE, Mus. Hein. III, 1860, 92 (Jalapa; Porto Cabello; Guiana; Brazil).—LAWR., Ann. Lyc. N. Y. VII, 1861, 290 (Isth. Panama).—SALVIN, Ibis, 1866, 203 (Guatemala).—COUES & SENNETT, Bull. U. S. Geol. Surv. Terr. vol. iv, No. 1, Feb. 1878, 34 (Brownsville, Texas).

Nyctidromus affinis, GRAY, List B. Brit. Mus. II, 1844, 11, No. 2.

Nyctidromus derbyanus, GOULD, Icon. Av. II, 1838, pl. 2.—GRAY & MITCH., Genera B. I, 1849, 48.—BONAP., Consp. I, 1850, 62.

Caprimulgus grallarius, WIED, Mus. Lugd. (teste BONAP., Consp. I, 1850, 62).

Nyctidromus grallarius, BONAP., Consp. I, 1850, 62 (Brazil).—CASSIN, P. A. N. S. 1851, 179, 183; Catal. Caprim. Mus. Phila. Acad. 1851, 12 (Bogota).—BURM., Th. Bras. II, 1856, 392.

Caprimulgus laticaudatus, DRAPIEZ, Dict. Class. Hist. Nat. VI, 1824, 169 (teste CASSIN).

SP. CH.—*Adult male*: Wing, 6.75; tail, 6.75; tarsus, 1.10; middle toe, .80. Tarsus and heel-joint completely bare. Above, finely mottled brownish-gray, the crown with a central series of black, longitudinal dashes, the scapulars beautifully variegated with black and creamy-buff or ochraceous, in large, somewhat V-shaped, markings; wing-coverts with large terminal spots of creamy-buff or ochraceous. Basal portion (sometimes almost the basal half) of the exposed portion of the larger primaries white, including both webs, and forming a conspicuous patch; remainder of the quills uniform plain dusky. Outer tail-feather (on each side) nearly plain blackish throughout; next feather chiefly white, with the greater portion of the outer web blackish; third feather chiefly white, with the outer web margined more or less with dusky; four middle tail-feathers without any white, the ground-color being mottled-grayish, variegated by ragged, badly defined "herring-bone" blotches of blackish along the shaft. Lower parts deep buff or creamy-ochraceous, the throat crossed by a distinct collar of pure white, the remaining portions transversely barred or "rayed" with dusky, these bars wider apart posteriorly.

Adult female: Wing, 6.00–6.30; tail, 5.80–6.00. Generally similar to the male, but smaller, the colors less pure, the markings less sharply contrasted, and the white areas of the primaries and rectrices more restricted. General hue of the plumage decidedly more brownish; white patches on the primaries situated rather farther toward the ends of the feathers, occupying only the outer four (instead of six) quills; of smaller extent than in the male, and more or less tinged with ochraceous. White of the rectrices occupying only the terminal portion (from 0.75 of an inch to 1.75 inches) of the inner web of the second and third tail-feathers (counting from the outer), the blackish portions of these feathers broadly though somewhat irregularly barred and mottled with ochraceous. White gular collar less distinct than in the male.

With a somewhat close general resemblance to the Whip-poor-will (*Caprimulgus vociferus*), this species may be at once distinguished by

the wholly naked tarsi, the white patch across the primaries, which are also destitute of ochraceous spots, by the much longer and differently marked tail and other features. It is, in fact, a far handsomer bird, and, not excepting even the "*Antrostomus*" *nuttalli*, is by far the most beautiful of the *Caprimulgidae* which occur in the United States. It is a species of very wide distribution, its range comprising the whole of the inter-tropical portions of America on both sides of the equator, with the exception of the West India Islands, from none of which it has thus far been recorded. It is subject to considerable variations of color, which have given rise to a number of synonyms, as may be seen by reference to the citations given above, but the variations seem to be of an individual and sexual nature, rather than geographical.—R. R.

This interesting addition to the avifauna of the United States proves to be a rather common summer visitor, arriving early in March, at least a month before any others of the family, and remaining as late, at least, as November 16, on which date I have taken two specimens. My first specimen was shot on the 1st of April, 1876, and its capture noted in the Bulletin of the Nuttall Ornithological Club, vol. 1, p. 88. Since that time, I have taken quite a number of specimens, and found several sets of eggs. The habits and eggs of this species, in addition to its anatomical characters, show its affinity with the Whip-poor-wills rather than the Nighthawks. It frequents shady thickets and copses (where these can be found), and when flushed dodges rapidly and silently among the bushes, but soon alights, only to repeat the short flight when again approached. The eggs are deposited in such a situation, usually at the foot of a bush; the parent, when started from her eggs, makes no attempt to decoy one away, but flying a few yards alights to watch the intruder, frequently raising herself on her legs and nodding in a curious manner, uttering at the same time a low, whining sound. Their notes are among the most characteristic night sounds of the Lower Rio Grande, and are constantly heard at evening during the summer months. They consist of a repeated whistle resembling the syllables *whew-whew-whew-whew-iche-e-e-e-w*, much stress being laid upon the last, which is prolonged. The whole is soft and mellow, yet can be heard at a great distance. The preliminary *whews* vary somewhat in number, and late in the season are often omitted altogether. The eggs are a rich creamy-buff color, sparingly marked with a deeper shade of the same and with lilac.

Specimens average 1.25 by .92 inches.

On the 15th of May, 1876, I found a set of eggs near camp at Hidalgo, and on returning in about fifteen minutes to secure the parent, who had disappeared among the thickets, I found that she had removed the eggs, although they had not been touched. At least two pairs breed annually within Fort Brown, part of the reservation affording them the shade and shelter they always seek.

117. *Antrostomus carolinensis*, (Gmel.)

A few taken during the migrations.—(DRESSER, Ibis, 1865, 470.)

118. *Antrostomus vociferus*, (Wils.)

Rather uncommon in spring and autumn.

119. *Chordeiles popetue*, (Vieill.)

Appears to be a rather rare visitant in spring and autumn.—(DRESSER, Ibis, 1865, 471.)

120. *Chordeiles popetue* var. *henryi*, Cassin.

Abundant during the summer months, arriving about the 1st of April, and leaving in September. Deposit their eggs near the edges of prairies. Specimens said by Ridgway to be smaller than typical *henryi*.—(*C. henryi*, DRESSER, Ibis, 1865, 471.)

121. * *Chordeiles acutipennis* var. *texensis*, Lawr.

Common summer visitor, arriving early in April. While var. *henryi* is usually found about prairies at some distance from houses, the present species is most plentiful just outside of Brownsville, and I have found several sets of eggs within the fort. These are usually deposited in exposed situations, among sparse chaparral, on ground baked almost as hard as brick by the intense heat of the sun. One set of eggs was placed on a small piece of tin, within a foot or two of a frequented path. The female sits close, and when flushed flies a few feet and speedily returns to its eggs. They make no attempt to decoy an intruder away. I have ridden up to within five feet of a female on her eggs, dismounted, tied my horse, and put my hand on the bird before she would move. This species is more strictly crepuscular than var. *henryi* or *popetue*, and is very seldom seen on the wing during the day. The notes are a mewling call, and a very curious call that is with difficulty described. It is somewhat like the distant and very rapid tapping of a large Woodpecker, accompanied by a humming sound, and it is almost impossible to tell in what direction or at what distance the bird is that makes the noise. Both these notes are uttered on the wing or on the ground, and by both sexes. The eggs vary considerably, but exactly resemble the surface on which they are placed. The ground color is usually clay: some are very sparingly dotted with brown; others mottled with light-brown and obscure lilac; others still are so thickly marbled with brown and lilac on a dark ground as to give them a granite-like appearance. They average 1.07 by .77.—(*C. texensis*, DRESSER, Ibis, 1865, 471.—SENNETT, B. Rio Grande, 34.)

122. *Chætura pelagica*, (Linn.)

Not uncommon during the migrations, arriving about March 20 and returning in September.

123. *Trochilus colubris*, Linn.

Abundant during the spring and autumn migrations, but I was not able to satisfy myself that any remained to breed or to pass the winter,

though I have seen them as late as December 7 and as early as March 9.—(DRESSER, *Ibis*, 1865, 470.—SENNETT, B. Rio Grande, 35.)

124. *Amazilia fuscicaudata*.

- Trochilus fuscicaudatus*, FRASER, P. Z. S. Feb. 11, 1840, 17 (Chachapoyas, Peru).
Hylocharis fuscicaudatus, GRAY & MITCH., Genera B. I, 114, sp. 26.
Saucerottia fuscicauda, REICHENB., Troch. Enum. 1855, 8, t. 696, figs. 4552-53.
Trochilus riefferi, BOURCIER, Ann. Sci. Phys. et Nat. Lyon, 1843, 45; Rev. Zool. 1843, 103 (Fusagasuga, New Granada).
Amazilius riefferi, BONAP., Consp. I, 1850, 78; Rev. Zool. 1854, 254.—SCL., P. Z. S. 1856, 140; 1857, 16 (Bogota); 1859, 145 (Pallatanga, Ecuador).
Amazilia riefferi, REICHENB., Av. Syst. Nat. 1849, pl. 39; Aufz. der Colibr. 1853, 10; Trochil. Enum. 1855, 8, t. 775, figs. 4798-99.—GOULD, Monog. Trochilid. V, 1853, pl. 311.—SCL., P. Z. S. 1859, 145; 1860, 94 (New Granada), 283 (Babahoyo, Ecuador), 296 (Esmeraldas, Ecuador); Catal. Am. B. 1862, 314, No. 1878 (Coban, Vera Paz; Baranquilla, New Granada; Esmeraldas, Ecuador).—SCL. & SALV., *Ibis*, 1859, 130 (Guatemala); 1860, 40 (Dueñas, Guatemala); 1864, 365 (Panama); Nom. Neotr. 1873, 92 (Mexico; Central America; New Granada; Ecuador).—SALVIN, *Ibis*, 1860, 195, 270 (Coban, Vera Paz); P. Z. S. 1867, 156 (Veragua); *Ibis*, 1872, 320 (Nicaragua).—WYATT, *Ibis*, 1871, 378 (San Nicolas, New Granada; alt. 3,000 feet).
Polytmus riefferi, GRAY & MITCH., Genera B. I, 1849, 108, No. 72.—GRAY, Hand-list, I, 1869, 132, No. 1680 (S. Mexico; Guatemala; "Andes."—Subg. *Amazili*).
Pyrhophæna riefferi, CABAN. & HEINE, Mus. Hein. III, 1860, 36.—GOULD, Introd. Trochilid. 1861, 158 ("Southern Mexico, Guatemala, and along the Andes to Ecuador"); P. Z. S. 1870, 803 (Citado, Ecuador).—LAWR., Ann. Lyc. N. Y. Oct. 23, 1865, 184 (Greytown, Nicaragua); *ib.* IX, 1868, 127 (Costa Rica); Bull. U. S. Nat. Mus. No. 4, 1876, 33 (Guichicovi, Isth. Tehuantepec).—MERRILL, Bull. Nutt. Orn. Club, I, Nov. 1876, 88 (Ft. Brown, Texas, June, 1876; 2 specimens).
Eranna riefferi, HEINE, J. f. O. 1863, 188 (New Granada).
Trochilus aglaia, BOURC. & MULS., Ann. Soc. Phys. Sc. Lyon, 1846, 329; Rev. Zool. 1846, 316 (*hab. incog.*).—MULS., Hist. Nat. Ois. Mouch. I, —, 319.
Polytmus aglaia, GRAY & MITCH., Genera B. I, 1849, 109, sp. 73.
Amazilius aglaia, BONAP., Consp. I, 1850, 71.
Saucerottia aglaia, REICHENB., Aufz. der Colibr. 1853, 10.
Chlorestes aglaia, REICHENB., Troch. Enum. 1855, 4.
Hemithylaca aglaia, CABAN. & HEINE, Mus. Hein. III, 1860, 38, note 13.
Ornismya amazili, DELATTRE, Écho du Monde Sav. No. 45, June 15, 1843, col. 1069.
"*Trochilus arsinoides*, SAUC., in Mus. of Berlin" (GOULD).
Trochilus dubusi, BOURC., Soc. Agric. Lyon, 1852, 141.
Amazilia dubusi, REICHENB., Aufz. der Colibr. 1853, 10; Trochil. Enum. 1855, 8, pl. 778, figs. 4809-10
Eranna dubusi, HEINE, J. f. O. 1863, 188 (Veragua; Guatemala; Costa Rica; S. Mexico).
Amazilius dubusi, BONAP., Rev. et Mag. de Zool. 1854, 254.—SCL., P. Z. S. 1856, 287; 1859, 386; 1860, 296.
Pyrhophæna dubusi, CABAN. & HEINE, Mus. Hein. III, 1860, 36.
Eranna jucunda, HEINE, J. f. O. 1863, 188 (Babahoyo and Esmeraldas, Ecuador).
Pyrhophæna sauris, CABAN. & HEINE, Mus. Hein. III, 1860, 38 (Cartagena, New Granada).
Eranna sauris, HEINE, J. F. O. 1863, 188 (Cartagena).

SP. CH.—Above metallic grass-green (varying to golden-green), more

bronzy on the crown and rump; longer upper tail-coverts cinnamon-rufous. Tail deep chestnut-rufous, the feathers tipped and edged for a greater or less distance from their ends with metallic greenish-bronze, glossed with purple; wing-coverts metallic green, like the back; rest of the wing uniform dusky slate, with a distinct violet purple gloss in certain lights. Side of the head bronzy-green, the lores bright cinnamon-rufous. Throat, jugulum, breast, and sides metallic green, most brilliant on the breast and jugulum, where bright emerald in certain lights, duller and more bronzy on the sides; throat-feathers grayish-white beneath the surface, this color showing wherever the feathers are disturbed. Abdomen pale mouse-gray; crissum deep cinnamon-rufous; anal tufts and thighs cottony-white. Bill reddish at the base for a greater or less distance (pale brownish in the dried skin), the terminal portion blackish; feet blackish. Wing, 2.00-2.35; tail, 1.45-1.70; culmen, .70-.90. *Sexes alike in color.* Young similar to the adult, but with the plumage duller, the rump more extensively tinged with rufous and the forehead washed with rusty.

With very numerous specimens before me, representing various localities, from Eastern Mexico to Guayaquil, Ecuador, I am unable to discover any differences coincident with locality, even in specimens from the most remote districts. There is a considerable range of individual variation, involving the amount of blackness of the maxilla (some specimens having the upper mandible wholly blackish except the extreme base, while in others only the end is dark-colored), length of wing and bill, etc. These differences, however, appear to be purely individual, and not at all, so far as I can see, local.—R. R.

The occurrence of this species within our limits was noted in the Bulletin of the Nuttall Ornithological Club, vol. i, p. 88. I have nothing to add to the brief note there published. The specimen was captured by a soldier and brought to me. After describing the bird, I returned it to him, as he wished to keep it, but it escaped in a day or two.

Found from Southern Texas to Ecuador.

125. **Amazilia yucatanensis*.

Trochilus yucatanensis, CABOT, Pr. Boston Soc. N. H. 1845, 74. (Yucatan.)

Amazilia yucatanensis, GOULD, Monog. Trochilid. V, 1853, pl. 308.—MULS., Hist. Nat. Ois. Mouch. I, —, 295.

Pyrhophana yucatanensis, GOULD, Introd. Troch. 1861, 157.

Eranna yucatanensis, HEINE, J. f. O. 1863, 187 (Yucatan).

Amazilia cerviniventris, GOULD, P. Z. S. June 10, 1856, 150 (Cordova, Mexico).—SCL., *ib.* 287 (Cordova); 1857, 17.

Amazilia cerviniventris, GOULD, Monog. Troch. V, 1853, pl. 319 (Cordova).—SCL., Catal. Am. B. 1862, 314, No. 1877 (Tlacotalpam, S. Mexico).—SCL. & SALV., Nom. Neotr. 1873, 92 (Mexico).—BOUCARD, Catal. Avium, 1876, 350, No. 10,966 (Yucatan).—MERRILL, Bull. Nutt. Orn. Club, II, Jan. 1877, 26 (Fort Brown, Texas, Aug. 17, 1876).—COUES & SENNETT, Bull. U. S. Geol. & Geog. Surv. Terr. vol. iv, No. 1, Feb. 1878, 35 (Brownsville, Texas).

Pyrrhophæna cerviniventris, CABAN. & HEINE, Mus. Hein. III, 1860, 36 (note).—GOULD, Introd. Trochilid. 1861, 157 (Cordova).

Eranna cerviniventris, HEINE, J. f. O. 1863, 187 (Cordova).

Polytmus cerviniventris, GRAY, Hand-list, I, 1869, 132, No. 1079 (Mexico.—Subg. *Amazili*).

SP. CH.—Above metallic grass-green, varying to golden-green, duller on the crown and more bronzy on the upper tail-coverts, which are sometimes slightly tinged on the edges with rufous. Tail cinnamon-rufous, the intermediæ more or less glossed with greenish-bronze (sometimes entirely of this color); the other feathers bronze terminally, this color usually following the edge for a greater or less distance from the tip. Wing-coverts metallic grass-green, like the back; remainder of the wing uniform brownish-slate, with a very faint violet-purple gloss in certain lights. Throat, jugulum, and sides of the head and breast brilliant metallic-green, almost emerald in certain lights, the feathers dull white beneath the surface, thus breaking the continuity of the green, especially on the throat, where the feathers are broadly tipped with green. Rest of lower parts pale fawn-color, or dilute cinnamon-buff, deepest on the crissum; sides glossed with bronze-green; anal tufts and thighs cottony-white. Bill reddish (light brown in the dried skin), the terminal third blackish. Feet dusky. Wing, 2.15–2.20; tail, 1.50–1.60, depth of its fork about 0.20; culmen, 0.80. *Sexes alike in coloration.*

HAB.—Eastern Mexico, from the Rio Grande Valley (United States side) to Yucatan.

The two examples in the National Collection (No. 24,873, Jalapa, and 70,949, Fort Brown, Texas) differ in some minor details of coloration. Thus, the former has the middle pair of tail-feathers entirely greenish-bronze, except a very small space on each web concealed by the longer upper tail-coverts; the bronzy ends of the other feathers are distinctly glossed with dark purple, and the outer pair of feathers have scarcely a trace of bronze at their ends. The latter specimen, on the other hand, has the basal two-thirds of the intermediæ wholly rufous, the bronzy ends of the other feathers destitute of a purple gloss, and the outer pair of feathers very distinctly tipped with bronze and edged for their whole length with a darker shade of the same color. These differences, however, are doubtless only individual, or, possibly, sexual. The Fort Brown specimen is a little the larger, but the difference in size is very slight. Neither has the sex marked.

I have not seen a specimen of the so-called "*yucatanensis*, Cabot", but follow Mr. Elliot (MSS.) in considering it the same as the bird afterwards described by Mr. Gould as *cerviniventris*.—R. R.

This Hummer, also new to the avifauna of the United States, and heretofore known only from Mexico, was first taken on the 17th of August, 1876, and its capture noted in the Bulletin of January, 1877, p. 26. It proves to be an abundant summer visitor, and I have nowhere found

it so abundant as on the military reservation at Fort Brown. Here it seems perfectly at home among the dense, tangled thickets, darting rapidly among the bushes and creeping vines, and is with difficulty obtained. A rather noisy bird, its shrill cries usually first attract one's attention to its presence. A Hummer's nest, undoubtedly made by this species, was found in September, 1877, within the fort. It was placed on the fork of a dead, drooping twig of a small tree on the edge of a path through a thicket: it was about seven feet from the ground, and contained the shrivelled body of a young bird. The nest is made of the downy blossoms of the tree on which it is placed, bound on the outside with cobwebs, and rather sparingly covered with lichens. Internally, it is somewhat less than one inch in depth by one-half inch in diameter. The external depth is one and one-half inch.

NOTE.—Besides these two species of Hummers actually taken, I have seen two others that are certainly new to our avifauna, but have not been able to capture them. One of these is a large, green species, with a long tail; the other, a very small bird, of a deep purplish-brown color.

126. *Geococcyx californianus*, (Less.)

This curious bird is abundant, and is a resident. Its food consists of insects, field-mice, small snakes, and snails. Of these latter, one species (a variety of *Bulimulus alternatus*) is very common, passing the dry season on bushes and cacti, and of this the bird is very fond. Quite large piles of the broken shells are constantly to be seen along the roadsides about some fallen branch on which the bird breaks them. As a rule, the "road-runner" is a silent bird, but occasionally it is heard to utter one of two notes. One is a "kook-kook-kook-kook", much like the call of the Yellow-billed Cuckoo, but louder, and usually heard during the breeding season. The other is a note of alarm or anger: it is a low, growling sound, accompanied by a chattering of the bill. The nests are usually placed in low, thorny bushes, and are thick, clumsy structures, with but a slight depression for the eggs. The latter appear to be deposited at intervals of several days, and a perfectly fresh egg is often found with one on the point of hatching. I have never found more than four eggs or young in one nest.—(DRESSER, *Ibis*, 1865, 466.—SENNETT, *B. Rio Grande*, 36.)

127. **Coccyzus americanus*, (Linn.)

Not uncommon summer visitor; breeding rather plentifully.—(DRESSER, *Ibis*, 1865, 467.—SENNETT, *B. Rio Grande*, 38.)

128. **Picus scalaris*, Wagler.

Common resident. In notes and habits, this little bird is so like the Downy Woodpecker that there is little to be said about it. Eighteen perfectly identified eggs now before me average .81 by .64, which is much less than the measurements given in Baird, Brewer, and Ridgway, II, 519.—(DRESSER, *Ibis*, 1865, 468.—SENNETT, *B. Rio Grande*, 38.)

129. *Hylotomus pileatus*, (Linn.)

Late in May, 1876, I saw one specimen near Santa Maria, and have seen several holes that from their size were probably made by this bird.*—(DRESSER, *Ibis*, 1865, 469.)

MEM.—Perhaps this was a Mexican species.

130. * *Centurus aurifrons*, (Wagl.)

This handsome Woodpecker is found abundantly, perhaps rather more so than *P. scalaris*. Its habits and mode of nesting do not differ from those of other Woodpeckers of the same size. In places where there is only low chaparral, the poles of the government telegraph line are completely riddled by this bird. The eggs are usually four in number, and are rather fragile; before they are blown, they are a beautiful shade of pink. Seven specimens average 1.03 by .76.—(SENNETT, B. Rio Grande, 39.—*C. flaviventris*, DRESSER, *Ibis*, 1865, 469.)

131. *Strix flammea* var. *pratincola*, Bon.

This Owl seems to be a rather common resident. Near Hidalgo it breeds in holes in the banks of the Rio Grande, and in Brownsville a few nest in ruined buildings.—(*S. pratincola*, DRESSER, *Ibis*, 1865, 330.—*S. flammea americana*, SENNETT, B. Rio Grande, 39.)

132. *Asio accipitrinus*, (Pall.)

During the latter part of January, 1877, a small gathering of these Owls frequented a patch of tall grass in an open field near Brownsville.—(*Brachyotus cassini*, DRESSER, *Ibis*, 1865, 330.)

133. *Scops asio* var. *maccalli*, Cass.

Common resident. Near Hidalgo, on May 6, 1876, I captured a female of this race on her nest in an old hollow stump about five feet from the ground. There were two eggs, nearly hatched, placed on a few chips at the bottom of the hole: these were of a dull white color with yellowish stains, and measure 1.40 by 1.15 and 1.39 by 1.13. The parent made an interesting pet for a few days, but finally escaped from my tent with one of the pegs to which it had been tied.—(*S. asio maccalli*, SENNETT, B. Rio Grande, 39.—*S. maccalli*, DRESSER, *Ibis*, 1865, 330.)

134. *Bubo virginianus*, (Gmel.)

Probably resident. I have seen them occasionally in deep woods, and on one occasion in a perfectly open prairie, miles from timber of any size.—(SENNETT, B. Rio Grande, 39.)

135. *Speotyto cunicularia* var. *hypogæa*, (Bon.)

The Burrowing Owl is rather abundant during the winter months, but I do not think that any remain to breed.—(*Athene hypogæa*, DRESSER, *Ibis*, 1865, 330.)

* This may possibly have been the Mexican species *H. scapularis* (Vigors).—R. R.

136. *Falco communis* var. *nævius*, Gmel.

Rather common on the prairies near the coast during winter.—(*F. anatum*, DRESSER, Ibis, 1865, 323.)

137. *Falco fusco-cærulescens*, Vieill.

Until recently but two specimens of this beautiful Falcon had been taken within the United States, one in New Mexico, the other in Texas.

During 1876 and 1877, I had occasionally seen a Hawk that I felt confident was of this species, but did not succeed in obtaining any specimens.

On the 16th of June of the latter year, I found a nest placed in the top of a low Spanish bayonet growing in Palo Alto prairie, about seven miles from Fort Brown. After waiting a long time, I wounded the female, but she sailed off over the prairie and went down among some tall grass, where she could not be found: the male did not come within gunshot, though he twice rose from the nest on my approach. The nest was a slightly depressed platform of twigs, with a little grass for lining. The eggs, three in number, were rotten, though containing well-developed embryos. They measure 1.81 by 1.29, 1.77 by 1.33, and 1.88 by 1.33 respectively. This set is now in Dr. Brewer's collection.

On May 7, 1878, a second nest was found within one hundred yards of the one just mentioned, and the parent secured. The nest in situation and construction was precisely like the other, except that the yucca was higher, the top being about twelve feet from the ground. The eggs were three in number, all well advanced but one, with a dead embryo. They measure 1.78 by 1.34, 1.82 by 1.29, 1.73 by 1.32; the ground-color is white, but so thickly dotted with reddish-brown as to appear of that color; over these are somewhat heavier markings of deeper shades of brown.

A single egg, without history, sent to me from Hidalgo, Texas, by Dr. S. M. Finley, U. S. A., measures 1.73 by 1.36: it is probably of this species, but its general appearance is much more reddish than either of the above sets.

Since becoming more familiar with the habits of this Falcon, I have several times observed it among yuccas and prickly pears on open prairies, and it is probably a not very uncommon summer resident in such places in this vicinity.

NOTE.—The egg referred to by Dr. Merrill as without history presents a very interesting problem, only to be solved when eggs precisely similar can be found with their parentage satisfactorily established. It may be an egg of *femoralis*, but is quite as likely to be something else. It resembles in the color and peculiarities of its markings no eggs of the *femoralis* I have ever seen. It has neither the beautiful vandyke-brown markings of the egg figured in my Oölogy, nor any of the more abundant raw-sienna dottings found in both the speci-

mens from the Pampas, and which is the only color present in the specimens identified by Dr. M. Instead, it is marked all over its surface with handsome spots and blotches of a deep reddish-buff, almost cinnamon in shade, completely obscuring the ground. Excepting in size, it most resembles an egg of *Hierofalco islandicus*.—T. M. B.

138. *Falco columbarius*, Linn.

Not uncommon during winter.—(DRESSER, Ibis, 1865, 323.—SENNETT, B. Rio Grande, 42.)

139. *Falco sparverius*, Linn.

Abundant from about the middle of September until the early part of April. All the specimens obtained were var. *sparverius*.—(SENNETT, B. Rio Grande, 42.—*Tinnunculus s.*, DRESSER, Ibis, 1865, 323.)

140. **Polyborus cheriway*, (Jacq.)

A common resident, but more abundant in winter than in summer. This seems to be due to a partial migration, from the north, of birds in immature plumage, for the number of mature individuals does not seem to vary. I do not think that the perfect plumage is acquired for at least two years. I have but little to add to the many accounts already given of this bird, except to say that, at times at least, it is more active than some of the descriptions would lead one to infer. I have seen a Caracara chase a jackass-rabbit for some distance through open mesquite chaparral, and while they were in sight the bird kept within a few feet of the animal and constantly gained on it, in spite of its sharp turns and bounds. If one bird has caught a snake or field-mouse, its companions that may happen to see it at once pursue, and a chase follows very different from what is seen among true Vultures. The nests are bulky platforms of small branches, with a slight depression lined with fine twigs, roots, and grasses, or sometimes altogether without lining: they are placed in trees or on the tops of bushes, at no great height from the ground. Both sexes incubate. I have not found more than two eggs in one nest, and these are laid at an interval of three or four days. Eleven eggs average 2.28 by 1.84. The ground-color is a deep chocolate or reddish-brown, more or less thickly covered with several darker shades of the same.—(*P. tharus*, DRESSER, Ibis, 1865, 329.—*P. tharus auduboni*, SENNETT, B. Rio Grande, 42.)

141. *Elanoides forficatus*, (Linn.)

This beautiful bird I have observed on but few occasions, and do not think that it breeds in this immediate vicinity. Nothing can be more graceful than its movements when pursuing insects, and for such a large bird it is very active.—(SENNETT, B. Rio Grande, 42.—*Nauclerus furcatus*, DRESSER, Ibis, 1865, 325.)

142. *Elanus leucurus*, (Vicill.)

Seen on a few occasions, but is rare.

143. *Circus hudsonius*, (Linn.)

Probably the most common species of Hawk during the winter months, arriving in September and leaving in April. A large proportion are in immature plumage.—(DRESSER, Ibis, 1865, 328.—*C. cyaneus hudsonius*, SENNETT, B. Rio Grande, 40.)

144. *Nisus fuscus*, (Gmel.)

Found sparingly in winter.—(*Accipiter f.*, DRESSER, Ibis, 1865, 324.)

145. *Nisus cooperi*, (Bon.)

Like the last.—(*Accipiter c.*, DRESSER, Ibis, 1865, 323.—SENNETT, B. Rio Grande, 42.)

146. *Antenor unicinctus* var. *harrisi*, (Aud.)

Resident and quite abundant. In its habits, this bird resembles the Caracara Eagle, but is not so active. The nests are hardly distinguishable in situation or construction, and the two eggs are also deposited at an interval of three or four days. Six eggs average 2.08 by 1.62; they are dull bluish or yellowish-white, faintly stained with yellowish-brown.—(*Craxirex unicinctus*, DRESSER, Ibis, 1865, 329.—*Buteo unicinctus harrisi*, SENNETT, B. Rio Grande, 42.)

147. *Buteo pennsylvanicus*, (Wils.)

Uncommon winter visitor.—(DRESSER, Ibis, 1865, 325.—SENNETT, B. Rio Grande, 43.)

148. *Buteo swainsoni*, Bon.

Occurs sparingly in winter.—(DRESSER, Ibis, 1865, 324.)

149. *Buteo borealis*, (Gmel.)

A pair seen January 10, 1877, near Fort Brown, seemed to approach var. *krideri* in the extent and purity of white beneath, although the subterminal band of black on the tail was very distinct. The birds sailed several times quite near me, and I had a very good view of them.—(DRESSER, Ibis, 1865, 324.)

150. *Buteo harlani*, Aud.

Early in November, 1876, I observed a single specimen of this species sailing in easy circles at no great distance from the ground; but, not having my gun, I was unable to secure it.—(DRESSER, Ibis, 1865, 324.)

151. *Buteo albicaudatus*.—The White-tailed Buzzard.

Aquila coliblanca, AZARA, Apunt. I, 1803, 69.

Buteo albicaudatus, VIEILL., Nouv. Diet. IV, 1816, 477 (ex AZARA, l. c.).—STRICKL., Orn. Syd. I, 1855, 35.—SALVIN, P. Z. S. 1870, 215 (Veragna).

Tachytriorchis albicaudatus, SHARPE, Cat. Acc. Brit. Mus. I, 1874, 162.

Craxirex albicaudatus, RIDGW., Pr. Ac. Nat. Sci. Phila. 1875, 92.

Buteo (*Craxirex*) *albicaudatus*, RIDGW., t. c. 98 (monographic).

Spizaetus leucurus, VIEILL., Nouv. Diet. XXXII, 1819, 59.

Buteo leucurus, LAFR., Rev. Zool. 1849, 100.

Falco pterocles, TEMM., Pl. Col. I, 1823, pls. 56 (*adult*) and 139 (*young*).

Buteo pterocles, LESS., Man. I, 1828, 103.—GRAY, Gen. B. I, 1849, 12: Handlist, I, 1869, 8.—CABAN., in Schomb. Guiana, III, 1848, 739.—KAUP, Contr. Orn. 1850, 75 (subgen. *Tachytriorehis*).—BURM., Th. Bras. II, 1855, 49.—SCHLEG., Mus. P.-B. Buteones, 1863, 13; Rev. Acc. 1873, 110.—PELZ., Orn. Bras. 1871, 3, 396.—SCL. & SALV. P. Z. S. 1870, 782 (Andes of Merida, Venezuela); Nom. Neotr. 1873, 119 (Mexico to Brazil).—LAWR., Bull. U. S. Nat. Mus. No. 4, 1876, 41 (Tapanz, S. Mexico, July).*

Tachytriorehis pterocles, KAUP, Säug. Vög. 1844, 123.—BONAP., Consp. I, 1850, 17.

Buteo albicauda, LESS., Traité, 1831, 81, pl. 15, fig. 2.—PUCHÉLAN, Rev. et Mag. Zool. 1850, 214.

Buteo tricolor, HARTL., Ind. Azara, 1847, 1 (*ucc* D'ORB.)

"*Buteo erythronotus*", SCL., P. Z. S. 1859, 389 (Oaxaca) (*ucc* KING).—SALVIN & SCL., Ibis, 1860, 401 (Antioquia, Guatemala).—LAWR., Ann. Lye. N. Y. IX, 1868, 133 (San José and San Antonio, Costa Rica).

"*Buteo harlani*" (supposed young), SHARPE, Cat. Acc. Brit. Mus. I, 1874, 191 (= *juv.t*).

HAB.—The whole of Middle America, north to the Lower Rio Grande Valley in Texas (on the eastern side), Colima (west coast), and the City of Mexico (central plateau); Eastern South America as far as Paraguay.

Diagnosis.—Wing, 14.50–18.00; tail, 7.70–10.50; culmen, .95–1.05; tarsus, 3.30–3.70; middle toe, 1.55–1.80. Form: Third quill longest; first intermediate between sixth and eighth. Tail even in adult, slightly rounded in young. Color: Adult, tail white (the lateral feathers much tinged with ash), crossed by a broad subterminal band of black; the white portion crossed by faint lines or narrow bars of plumbeous. Above dark plumbeous; rump and lower parts pure white; throat plumbeous-black or bluish-plumbeous. Flanks, rump, and lining of the wing usually faintly barred with ashy, dusky, or rufous. ♂: Lesser wing-coverts with a restricted patch of rufous on the anterior portion; longer scapulars strongly tinged with rufous. ♀: Rufous patch on lesser wing-covert region extended over nearly the whole of its area; longer scapulars scarcely tinged with rufous. Young: Tail hoary-grayish (the inner webs mostly white), growing gradually darker terminally, and passing narrowly into dull whitish or rufous at tip; crossed by numerous narrow and very indistinct bars of darker, these growing gradually obsolete towards the base.† General color brownish-black, the lower parts more or less variegated (most conspicuously on the posterior portions and on middle of the breast) with ochraceous or whitish.

Remarks.—The identity of specimens of the two plumages described in the diagnosis as "adult" and "young" is proven by specimens in which part of the tail-feathers are of one plumage and part of the other. Such a specimen is in Mr. Lawrence's collection from the City of Mexico.

The older individuals in the immature dress are colored as follows:—Tail hoary ash, growing darker terminally, and passing narrowly into

* Iris hazel-brown; cere greenish; feet yellow.

† Fide SALVIN, Ibis, October, 1874, 314.

‡ These bars are sometimes entirely obsolete on the outer webs.

brownish-white at the tip—the inner webs mostly white; the terminal half with just discernible obscure bars of darker, these becoming gradually obsolete on the basal half; sometimes they are entirely obsolete for the full length of the outer webs. Upper tail-coverts pure white, usually immaculate, but sometimes barred; inner webs of primaries ashy, the two or three outer ones more whitish, and sometimes barred with dusky. In males, the middle of the breast, the tibiæ, and crissum are usually ochraceous, irregularly spotted with brownish-black.

The darker-colored individuals in this stage are distinguishable from the dark examples of the young of *B. swainsoni* only by the very much stouter and longer tarsi.

The adults vary but little. The white of the jugulum usually reaches forward medially into the plumbeous of the throat, and in one (δ ad., Tehuantepec, Mexico; Sumichrast) it extends—interruptedly, however—to the chin. Another male from the same locality has the scapulars almost entirely rufous, with black shaft-streaks. The white of the lower parts in the adult is of a pureness and continuity strikingly characteristic of this species.

A very young specimen from Paraguay has the tail more brownish, more distinctly barred, and more ochraceous on the tip; the upper tail-coverts are ochraceous, marked with broad crescentic bars of blackish, and the upper parts generally are variegated with ochraceous.

The specimen collected by Dr. Merrill (No. 74,464) is an adult male in fine plumage. It agrees strictly with Mexican examples of corresponding sex and age. Dr. M. furnishes the following notes on this specimen:—"Length, 19.20; extent, 47.40; wing, 15.30; tail, 7.20. Feet and legs yellow; cere greenish yellow; tip of bill dark, basal half bluish green; iris brown."

Material examined.—United States National Museum, 13; Museum of the Academy of Natural Sciences of Philadelphia, 6; Museum of G. N. Lawrence, Esq., 1; other specimens,* 4. Total number of specimens examined, 24.

Measurements.

Sex and age.	Wing.	Tail.	Culmen.	Tarsus.	Middle toe.	Specimens.
δ ad.	16.30—16.70	7.50—9.00	.95—1.10	3.30—3.55	1.60—1.80	5
δ juv.	14.50—16.75	8.60—8.75	1.02—....	3.30—3.60	1.55—1.65	3
ϕ ad.	17.75—....	8.25—.....	1.00—....	3.60—....	1.75—....	1
ϕ juv.	17.00—17.75	8.40—10.30	.95—1.05	3.30—3.70	1.60—1.80	3

This fine Hawk is a rather common resident on the extensive prairies near the coast, especially about the sand ridges that are covered with yucca and cactus. Its habits appear to be like those of the allied species of Prairie Hawks. On the 2d of May, 1878, I found two nests, each

* These are specimens collected on the Isthmus of Tehuantepec by Prof. F. Sumichrast, and not entered in the Register of the National Museum.

placed in the top of a yucca growing in Palo Alto prairie, about seven miles from the fort. The nests were not more than eight feet from the ground, and were good-sized platforms of twigs, with scarcely any lining. While examining these nests, the parents sailed in circles overhead, constantly uttering a cry much like the bleating of a goat. Each nest contained one egg. The first was quite fresh, and measures 2.35 by 1.91. It is of a dirty-white color, with a few reddish blotches at the smaller end. The second egg was partly incubated. It resembles the first one, but the reddish blotches are rather sparsely distributed over the entire egg. It measures 2.35 by 1.85.

152. *Rhinogryphus aura*, (Linn.)

Very common at all seasons. Deposits its eggs on the ground, sometimes on the open prairie; at others, in more or less dense chaparral.*—(*Cathartes a.*, DRESSER, Ibis, 1865, 322.—SENNETT, B. Rio Grande, 44.)

153. *Catharistes atratus*, (Bart.)

About as common as the preceding species, and, like it, breeds on the ground. I have not heard of either species building in trees here, as they are said to do in other parts of Texas.—(*Cathartes a.*, DRESSER, Ibis, 1865, 322.—SENNETT, B. Rio Grande, 45.)

154. *Columba flavirostris*, Wagl.

This large and handsome Pigeon is found in abundance during the summer months, arriving in flocks of fifteen or twenty about the last week in February. Though not very uncommon about Fort Brown, it is much more plentiful a few miles higher up the river, where the dense woods offer it the shade and retirement it seeks. Three nests found in a grove of ash-trees, on the bank of the Rio Grande, near camp at Hidalgo, were frail platforms of twigs, such as are usually built by other Pigeons. Each contained one egg. It would appear from Mr. Sennett's observations, which are more complete than mine, that this Pigeon rarely, if ever, lays more than one egg. These are of a pearly whiteness, and average 1.50 by 1.08. Both sexes incubate. A perfectly fresh specimen has the soft parts as follows:—Terminal half of bill pale horn-color; basal half light pink; margin of eyelids and a ring near its base deep pinkish-red; iris bright orange-yellow, lighter yellow at pupillary margin; legs and feet vivid purplish-red.—(DRESSER, Ibis, 1866, 23.—SENNETT, B. Rio Grande, 45.)

155. * *Melopelia leucoptera*, (Linn.)

Very common during the summer months. The nests as a rule are smaller and more frail than those of the Carolina Dove, and the eggs have a decided creamy tinge, which is rarely lost after blowing, at least

* I have looked carefully for *R. burrovianus*, but without success, although Mr. Dresser (Ibis, 1865, p. 322) states that he has seen it on Palo Alto prairie, not more than seven miles from the fort.

not for months. Thirty-four eggs average 1.17 by .88; extremes 1.30 by .95 and 1.05 by .80. The note is a deep, sonorous *coo*, frequently repeated, and heard at a great distance.—(DRESSER, Ibis, 1866, 24.—SENNETT, B. Rio Grande, 47.)

156. * *Zenædura carolinensis*, (Linn.)

Although this species is found throughout the year, it is decidedly uncommon during the winter months; probably not more than 5 per cent. or less remain at that season. One habit noticed here I have not seen mentioned before,—that of occasionally occupying old nests of the Great-tailed Grackle for their second brood.—(DRESSER, Ibis, 1866, 24.—SENNETT, B. Rio Grande, 47.)

157. * *Chamæpelina passerina*, (Linn.)

Quite abundant, particularly in summer. The small and rather compact nests are placed on the horizontal branch of a stout bush or tree, and are lined with a few straws. On one occasion, I found the eggs in a roughly made nest on the ground on the edge of a prairie.—(DRESSER, Ibis, 1866, 24.—SENNETT, B. Rio Grande, 48.)

158. * *Æchmoptila albifrons*.

Z[enaida] amabilis, MCCALL, Pr. Ac. Nat. Sci. Phila. 1851, 220 (between Matamoras and Camargo).

"*Leptoptila albifrons*, GRAY, List Spec. Brit. Mus. p. 15."—BONAP., Consp. II, 1855, 74.—SCL., P. Z. S. 1859, 363 (Jalapa); 1860, 289 (Bahahoyo, Ecuador); 1864, 178 (City of Mexico); 1870, 838 (Honduras).—SCL. & SALV., Ibis, 1859, 222 (Dueñas, Guatemala); P. Z. S. 1864, 370 (Guatemala; Panama); 1868, 60 (Mexico; Guatemala); 1870, 838 (coast of Honduras); Noun. Neotr. 1873, 133.—LAWR., Pr. Boston Soc. 1871, — (Tres Marias Islands, W. Mexico; common. Vulg.: "*Paloma*"); Mem. Boston Soc. II, 1874, 305 (Mazatlan; Tres Marias; habits); Bull. U. S. Nat. Mus. No. 4, 1876, 44 (Isth. Tehuantepec. "Iris orange; bill black; bare orbital space bluish; feet carmine").—COUES, Bull. Nutt. Orn. Club, II, July, 1877, 82 (Hidalgo, Texas, April 18, 1877; not uncommon; breeding).

Æchmoptila albifrons, COUES & SENNETT, Bull. U. S. Geol. and Geog. Surv. Terr. vol. iv, No. 1, 1878, 49 (Hidalgo, Texas).

Peristera albifrons, BONAP., Consp. II, 1855, 74 (Mexico; "Cuba"; "Columbia"; "Carthagenas").—GRAY, Hand-list, II, 1870, 242 (Mexico. Subg. *Leptotila*).

"*Peristera brachyptera*, GRAY, MSS." (SCLATER).

[A good description of this species having already been given by Dr. Coues in Mr. Sennett's paper, I give here only a list of references, mostly additional to those already published.—R. R.]

This Pigeon is not rare in the vicinity of Fort Brown, but is shy and not very often seen. I can give nothing very definite in regard to its habits. The only nest I have found was taken on June 8, 1878, on the government reservation. It was about seven feet from the ground, supported by the dense interlacing tendrils of a hanging vine growing on the edge of a thicket. The eggs, two in number, were quite fresh.

They measure 1.16 by .86 and 1.19 by .89. They are much like eggs of *M. leucoptera*, but have a strong olive-buff instead of a creamy-buff tinge.

159. *Ortalia vetula* var. *maccalli*, Baird.

The Chachalac, as the present species is called on the Lower Rio Grande, is one of the most characteristic birds of that region. Rarely seen at any distance from woods or dense chaparral, they are abundant in those places, and their hoarse cries are the first thing heard by the traveller on awaking in the morning. During the day, unless rainy or cloudy, the birds are rarely seen or heard; but shortly before sunrise and sunset, they mount to the topmost branch of a dead tree, and make the woods ring with their discordant notes. Contrary to almost every description of their cry I have seen, it consists of three syllables, though occasionally a fourth is added. When one bird begins to cry, the nearest bird joins in at the second note, and in this way the fourth syllable is made; but they keep such good time that it is often very difficult to satisfy one's self that this is the fact. I cannot say certainly whether the female utters this cry as well as the male, but there is a well-marked anatomical distinction in the sexes in regard to the development of the trachea. In the male, this passes down outside the pectoral muscles, beneath the skin, to within about one inch of the end of the sternum; it then doubles on itself, and passes up, still on the right of the keel, to descend within the thorax in the usual manner. This duplicature is wanting in the female. These birds are much hunted for the Brownsville market, though their flesh is not particularly good, and the body is very small for the apparent size of the bird. Easily domesticated, they become troublesome familiar, and are decided nuisances when kept about a house. Beyond Ringgold Barracks, this species is said to become rare, and soon to disappear; and it probably does not pass more than fifty miles to the north of the Rio Grande. The nests are shallow structures, often made entirely of Spanish moss, and are placed on horizontal limbs a few feet from the ground. The eggs, commonly three in number, are about the size and shape of common hens' eggs; they are of a buffy-white, and are roughly granulated; they average about 2.18 by 1.55.—(*O. maccalli*, DRESSER, Ibis, 1866, 24.—*O. vetula*, SENNETT, B. Rio Grande, 50.)

160. *Meleagris gallopavo*, Linn.

Found in abundance in all suitable localities, but not in the immediate vicinity of the fort; birds taken here present the characters of var. *mexicana* well developed. Two eggs taken near Hidalgo by Mr. G. B. Sennett, and presented to me, are quite unlike; one measures 2.41 by 1.84, and in color and markings is like a typical egg of the domestic turkey; the other egg, 2.33 by 1.72, is of a pale creamy-white, the spots being few and very pale.—(DRESSER, Ibis, 1866, 25.—SENNETT, B. Rio Grande, 53.)

161. *Cupidonia cupido* var. *pallidicincta*, Ridgw.

I am informed by a person perfectly familiar with the bird that the Prairie Chicken is occasionally seen on the prairies about Miradores

ranch, which is about thirty miles north of the fort and a few miles from the coast. This is probably about the southernmost point in the range of the bird.—(*C. cupido*, DRESSER, Ibis, 1866, 26.)

162. **Ortyx virginiana var. texana*, Lawr.

The Texan Quail is very common, and in its habits resembles the Eastern Quail in all respects, except that it does not lie well to a dog. They are with difficulty flushed, but run at once into chaparral, from which it is almost impossible to dislodge them. The only nest I succeeded in finding was at the foot of a small stump, surrounded by a small, but dense, growth of offshoots; the nest was rather elaborately built of grasses, and was well domed. On the 21st of May, it contained sixteen fresh eggs. These average 1.15 by .93, the extremes being 1.18 by .95 and 1.12 by .92. Four odd eggs from different nests are rather larger than this average.—(*O. texanus*, DRESSER, Ibis, 1866, 27.—*O. virginiana texana*, SENNETT, B. Rio Grande, 53.)

163. *Callipepla squamata*, (Vigors.)

This beautiful Partridge is found in great abundance at Ringgold Barracks about 120 miles from Fort Brown, but does not come very much farther down the river. Hidalgo is about the limit of their range in this direction, though on September 13, 1877, I killed one within two miles of the fort. This was one of a covey and the only one flushed, and I did not recognize it until I picked it up; the others were not distinctly seen, but were probably of the same species.—(DRESSER, Ibis, 1866, 28.)

164. *Ægialitis vocifera*, (Linn.)

Common resident.—(DRESSER, Ibis, 1866, 33.—SENNETT, B. Rio Grande, 53.)

165. *Ægialitis wilsonia*, (Ord.)

Resident, breeding rather abundantly along the coast.—(DRESSER, Ibis, 1866, 34.)

166. *Hæmatopus palliatus*, Temm.

Breeds on Padre and Brazos Islands.—(DRESSER, Ibis, 1866, 34.—SENNETT, B. Rio Grande, 53.)

167. *Streptilas interpres*, (Linn.)

The Turnstone is found on the coast and adjacent lagoons throughout the year, and I feel confident that it breeds in spite of the latitude. During May and June pairs in full plumage may daily be seen in the same localities.—(DRESSER, Ibis, 1866, 34.—SENNETT, B. Rio Grande, 54.)

168. *Recurvirostra americana*, Gm.

Common during winter, a few pairs remaining to breed.—(DRESSER, Ibis, 1866, 35.—SENNETT, B. Rio Grande, 54.)

169. *Himantopus mexicanus*, (Müller.)

Common resident. Breeds in the marshes about the middle of May, making its nests on wet grassy flats and laying three or four eggs. The nests are platforms of straw and grasses, often wet, and barely keeping the eggs out of the water. Twenty-two eggs average 1.75 by 1.19, the extremes being 1.88 by 1.25 and 1.60 by 1.10.—(*H. nigricollis*, DRESSER, Ibis, 1866, 35.—SENNETT, B. Rio Grande, 54.)

170. *Gallinago wilsoni*, (Temm.)

Plentiful during the winter, though the great majority go farther south. The time of their arrival in the autumn is uncertain. In 1876, the first were shot on the 18th of September, and they soon became abundant; this was said to be at least a month earlier than usual. In 1877, the main flight arrived on the 28th of November, during a cold and wet "norther".—(DRESSER, Ibis, 1866, 36.)

171. *Macrorhamphus griseus*, (Gmel.)

Common from September until April.—(DRESSER, Ibis, 1866, 36.)

172. *Tringa alpina* var. *americana*, Cass.

On May 16, 1877, I found the Red-backed Sandpiper rather common about some lagoons in the salt marshes; the males were in full breeding plumage.

173. *Tringa bairdii*, Coues.

Two females taken March 30, 1876, on a sand-bar in the river.

174. *Tringa maculata*, Vieill.

Common during the migrations, returning in the latter part of July. They do not seem to pass the winter.—(DRESSER, Ibis, 1866, 36.—SENNETT, B. Rio Grande, 55.)

175. *Tringa fuscicollis*, Vieill.

Common in winter.

176. *Tringa minutilla*, Vieill.

Common in winter.—(*Tringa wilsoni*, DRESSER, Ibis, 1866, 37.)

177. *Calidris arenaria*, (Linn.)

Common in winter on Padre and Brazos Islands, where I have also seen it in July.

178. *Ereunetes pusillus*, (Linn.)

Common in winter.—(*E. petrificatus*, DRESSER, Ibis, 1866, 37.)

179. *Micropalama himantopus*, (Bonap.)

October 13, 1877.—(DRESSER, Ibis, 1866, 37.)

180. *Actiturus bartramius*, (Wils.)

This species arrives in small flocks about the second or third week in March, and is found abundantly on the grassy prairies. On its arrival

in spring, it is in poor condition, and soon goes farther north, though a few linger until about May 10. Late in July some reappear, and by the first of September they are abundant; by the middle of this month, they begin to leave, and few are seen or heard after the first week in October.—(DRESSER, Ibis, 1866, 38.—SENNETT, B. Rio Grande, 55.)

181. *Tryngites rufescens*, (Vieill.)

The Buff-breasted Sandpiper is found in the same localities and at the same seasons as the Upland Plover, which it closely resembles in habits, but is much less shy and suspicious.—(DRESSER, Ibis, 1866, 39.)

182. *Limosa fedoa*, (Linn.)

Taken in spring and autumn.—(DRESSER, Ibis, 1866, 39.—SENNETT, B. Rio Grande, 55.)

183. *Symphemia semipalmata*, (Gmel.)

Breeds rather plentifully in suitable localities. Four eggs, somewhat advanced in incubation, were found on May 2, 1877, placed on a few grass-blades under a weed in a dry part of the marsh. Two of the eggs were broken by the carriage-wheel; the others measure 2.06 by 1.52 and 2.05 by 1.50. I do not think that any remain during winter.—(DRESSER, Ibis, 1866, 37.—*Totanus s.*, SENNETT, B. Rio Grande, 55.)

184. *Gambetta melanoleuca*, (Gmel.)

Abundant during the migrations, many passing the winter here.—(DRESSER, Ibis, 1866, 38.—SENNETT, B. Rio Grande, 55.)

185. *Gambetta flavipes*, (Gmel.)

Like the last, but perhaps less common in winter.—(DRESSER, Ibis, 1866, 38.)

186. *Numenius longirostris*, Wils.

Common during winter, many remaining to breed on the partially dry marshes near the coast. Found recently fledged young June 16.—(DRESSER, Ibis, 1866, 40.—SENNETT, B. Rio Grande, 55.)

187. *Numenius borealis*, (Forst.)

Common during the migrations, some passing the winter.—(DRESSER, Ibis, 1866, 40.—SENNETT, B. Rio Grande, 56.)

188. *Charadrius fulvus var. virginicus*, Borek.

Not rare in winter.—(*C. virginicus*, DRESSER, Ibis, 1866, 33.)

189. *Tringoides macularius*, (Linn.)

Rather rare in winter.—(DRESSER, Ibis, 1866, 38.)

190. *Tantalus loculator*, Linn.

On the 10th of April, 1876, I saw a pair of these birds on the edge of a shallow lagoon near Fort Brown.—(DRESSER, Ibis, 1866, 32.)

191. *Plegadis guarauna*, (Gm.)

Resident, but much more common in summer than in winter. On the 16th of May, 1877, Mr. G. B. Sennett and I visited a large patch of tulé-reeds growing in a shallow lagoon, about ten miles from the fort, in which large numbers of this Ibis and several kinds of Herons were breeding. The reeds covered an area of perhaps seventy-five acres or less, growing in water three or four feet in depth. Irregular channels of open water traversed the reeds here and there, but the bottom was comparatively firm, and there was little difficulty in wading in any direction. Besides the Ibises, the Great and Little White Egrets, Louisiana and Night Herons, and several other birds were breeding here. Often nests of all these species were placed within a few feet of each other, but there was a tendency towards the different kinds forming little nesting groups of ten or fifteen pairs. The reeds grew about six feet above the surface of the water, and were either beaten down to form a support for the nests, or dead and partly floating stalks of the previous year were used for that purpose.

It was impossible to estimate the number of the Ibises and different Herons nesting here. On approaching the spot, many would be seen about the edges of the lagoon or flying to or from more distant feeding grounds, but upon firing a gun a perfect mass of birds arose, with a noise like thunder, from the entire bed of reeds, soon to settle down again.

Both nests and eggs of the Ibises were quite unlike those of any of the Herons, and could be distinguished at a glance. The nests were made of broken bits of dead tulés, supported by and attached to broken and upright stalks of living ones. They were rather well and compactly built, and were usually well cupped, quite unlike the clumsy platforms of the Herons. The eggs were nearly always three in number, and at this date were far advanced in incubation; many nests contained young of all sizes. Fifty eggs now before me average 1.95 by 1.35, the extremes being 2.20 by 1.49 and 1.73 by 1.29; they are decidedly pointed at the smaller end, and are of a deep bluish-green color.

On May 7 of the following year, I revisited this heronry, but there were no nests, and very few Ibises or Herons were to be seen. I am inclined to think that they moved to some other part of the extensive prairie, in several parts of which were beds of reeds similar to the one above described, but I was prevented by sickness from making any further investigations.

The young, when first hatched, are clothed in blackish down; the bill is whitish, with dusky base. When nearly fledged, the wings and back have a very marked metallic lustre; the base of bill, with terminal one-fourth inch and a two-fifths inch median band, black; the intervening portions pinkish-white.—(*Ibis ordi*, DRESSER, *Ibis*, 1866, 32.—*Falcinellus g.*, SENNETT, *B. Rio Grande*, 56.)

192. *Ibis alba*, (Linn.)

A few observed at all seasons, but I was unable to find any locality where they nested.—(DRESSER, *Ibis*, 166, 32.—SENNETT, *B. Rio Grande*, 58.)

193. *Platalea ajaja*, Linn.

Not rare, but more common near the coast. It must breed in the vicinity.—(DRESSER, *Ibis*, 1866, 33.—SENNETT, *B. Rio Grande*, 58.)

194. *Ardea herodias*, Linn.

Common resident. Found nesting abundantly on Padre Island by Mr. Sennett.—(DRESSER, *Ibis*, 1866, 31.—SENNETT, *B. Rio Grande*, 58.)

195. *Herodias egretta*, (Gm.)

Common resident, but more plentiful in summer. Breeds abundantly in the same locality as the preceding species. The nests, as a rule, were distinguishable by their large size; the eggs and young were also quite characteristic. Twelve eggs average 2.14 by 1.54.—(DRESSER, *Ibis*, 1866, 31.—SENNETT, *B. Rio Grande*, 59.)

196. *Garzetta candidissima*, (Jacq.)

Abundant during the summer, a few passing the winter. Breeds in great numbers. Its nest and eggs are only to be confounded with those of the succeeding species.—(DRESSER, *Ibis*, 1866, 31.—SENNETT, *B. Rio Grande*, 59.)

197. *Hydranassa tricolor*, (Müll.)

Common summer visitant. I do not think that any are found here during winter. In visiting the heronry already referred to, the Louisiana Heron was found in abundance. The birds seemed more shy in leaving their nests than the two preceding. The nests and eggs closely resembled those of the Little White Egret, and could not be positively identified without seeing the parent; but, as a rule, the nests were smaller, and the eggs a little larger and of a deeper shade.—(SENNETT, *B. Rio Grande*, 60.—*Demiegretta ludoviciana*, DRESSER, *Ibis*, 1866, 31.)

198. *Dichromanassa rufa*, (Bodd.)

Not uncommon during the summer. In the latter part of March, 1878, Mr. Sennett found this species breeding in large numbers on Padre Island. The nests were placed on low prickly pears or on the ground.—(SENNETT, *B. Rio Grande*, 60.—*Demiegretta rufa*, DRESSER, *Ibis*, 1866, 31.—*Demiegretta pealii*, DRESSER, *Ibis*, 1866, 31.)

199. *Florida cærulea*, (Linn.)

Seen throughout the year, but most abundantly in summer. Breeds on Padre Island.—(DRESSER, *Ibis*, 1866, 31.—SENNETT, *B. Rio Grande*, 61.)

200. *Nyctiardea grisea var. nævia*, (Bodd.)

Rather common resident, but many go farther south in winter. Found breeding with the other species among the tulés, but in fewer

numbers. The nests differed from those of the others by twigs and small branches being generally used in their construction, which must have been brought from a considerable distance. They were but slightly above the surface of the water, and most of the nests contained nearly fledged young.—*N. gardeni*, DRESSER, Ibis, 1866, 32.—*N. navia*, SENNETT, B. Rio Grande, 61.)

201. *Nyctherodius violaceus*, (Linn.)

Rather uncommon. Probably breeds at no great distance, but I found no nests.—(DRESSER, Ibis, 1866, 32.—SENNETT, B. Rio Grande, 61.)

202. **Butorides virescens*, (Linn.)

Common in summer, but rare in winter. Several pairs breed within Fort Brown, placing their nests on horizontal branches of mesquite-trees. Several sets average 1.49 by 1.15.—(DRESSER, Ibis, 1866, 32.)

203. *Botaurus lentiginosus*, (Montag.)

Occurs in moderate numbers during the migrations.—(DRESSER, Ibis, 1866, 32.)

204. *Ardetta exilis*, (Gmel.)

A few pairs were seen in the heronry already referred to. No nests were found, but the birds unquestionably breed there.—(DRESSER, Ibis, 1866, 32.—SENNETT, B. Rio Grande, 61.)

205. *Grus americana*, (Linn.)

Not rare, especially on the prairies near the coast. I do not think that either species of Crane breeds in this neighborhood.—(DRESSER, Ibis, 1866, 30.—SENNETT, B. Rio Grande, 61.)

206. *Grus canadensis*, (Linn.)

Decidedly more abundant than the White Crane during the winter months, and not so shy.—(DRESSER, Ibis, 1866, 30.)

207. *Perzana carolina*, (Linn.)

Common during the migrations. I am quite positive that a few pairs breed near here in suitable localities.—(DRESSER, Ibis, 1866, 40.)

208. *Gallinula galeata*, (Licht.)

Parents and eggs obtained on the 16th of May among beds of reeds.—(SENNETT, B. Rio Grande, 61.)

209. *Ionornis martinica*, (Linn.)

Doubtless breeds, for I have taken young birds in September that were scarcely able to fly.—(DRESSER, Ibis, 1866, 41.)

210. *Fulica americana*, Gm.

Very common resident. Breeds among patches of tulés, making a rather bulky platform of bits of dead reeds scarcely raised above the surface of the water. Fourteen is the greatest number of eggs I have found in one nest.—(DRESSER, Ibis, 1866, 40.—SENNETT, B. Rio Grande, 62.)

Family PARRIDÆ: The JACANAS.

- Parridæ*, "SELYS, 1842".—GRAY, Hand-list, III, 1871, 69.—SCL. & SALV., Nom. Neotr. 1873, viii, 142.—BOUCARD, Cat. Av. 1876, IX, 11.
 < *Rallidæ*, VIGORS (*vide* GRAY).—LILLJEBORG, P. Z. S. 1866, 17.
 = *Parrinæ*, GRAY, List Genera B. 1840, —; 2d ed. 1841, 91 (< *Palamedeidæ*).—GRAY & MITCH., Genera B. 4to, III, 1849, 588 (< *Palamedeidæ*); Genera and Subg. 1855, 119 (< *Palamedeidæ*).—LILLJEBORG, P. Z. S. 1866, 17 (< *Rallidæ*).
 < *Palamedcidæ*, GRAY, l. c.
 < *Gallinulidæ*, BLAS. (*vide* GRAY).

CH.—Small-sized wading birds, combining the general appearance of Rails and Plovers, but differing from either in the remarkable and excessive elongation of the toes and claws, the latter nearly straight and much compressed, that of the hallux much longer than its digit and slightly recurved.

The above brief diagnosis is sufficient to distinguish the Jacanas from all other wading birds. Their nearest allies appear to be the Plovers, from which they differ chiefly in the character of the feet, as pointed out above. The single American genus *Parra*, Lath., is further characterized by the presence of leaf-like lobes at the base of the bill, and a sharp, conical spur projecting from the inside of the bend of the wing, in the possession of which features they present a striking analogy to certain Plovers, as the genera *Lobivanellus*, Strickl., and *Hoplopterus*, Bonap. The genus *Parra*, of which there are several species, all American,* is characterized as follows:—

Genus PARRA, Linnæus.

- < *Jacana*, BRISS., Orn. V, 1760, 121. Type, *Parra jacana*, AUCT. (Includes *Hydractector*, Wagl., and *Metopodius*, Wagl.)
 < *Gallinula*, RAY (*vide* GRAY).
 < *Parra*, LINN., S. N. I, 1766, 259. Type, *P. dominica*, Linn., = *Lobivanellus brissoni*, (Wagl.)! (Includes also *Chauna* and *Jacana*).—LATHAM, Ind. Orn. II, 1790, 762. Type, *P. jacana*, Linn. (Includes *Hydrophasianus*, Wagl., *Chauna*, Illiger, and *Metopodius*, Wagl.)—GRAY, Hand-list, III, 1871, 69 (subg. *Parra*).
 = *Parra*, GRAY, List Genera, 2d ed. 1841, 91; Gen. and Subg. 1855, 119, No. 1976.—GRAY & MITCH., Genera B. III, 1849, 288.—SCL., P. Z. S. 1856, 282 (synopsis of species).—SCL. & SALV., Nom. Neotr. 1873, 142 (list of species).—BOUCARD, Cat. Av. 1876, 11 (list of species).

CH.—Remiges normal. Rectrices much abbreviated, very soft, entirely concealed by the tail-coverts. Forehead with large, leaf-like lobe, free laterally and posteriorly, adhering centrally and anteriorly; rictus ornamented by a smaller lobe (rudimentary in *P. gymnostoma*).

The above characters are chiefly those which distinguish the American genus *Parra* from its Old World allies *Hydrophasianus*,† *Metopo-*

* For a synopsis of the species of this genus, see Selater "On the American Genus *Parra*", in Proc. Zool. Soc. Lond. 1856, p. 282.

† "*Hydrophasianus*, Wagler, 1832." Type, *H. chirurgus* (Scopoli).

dus,* and *Hydralector*.† I am unable to state in just what essential particulars the two latter differ from *Parra*, never having seen specimens of any species of either form. The first, however, differs very widely in the great development of the rectrices, of which the intermediæ are excessively elongated; in the curious attenuation of the primaries, which are, moreover, of very unequal length, and in the entire absence of lobes about the base of the bill. These characters I have drawn from figures of the single species, *H. chirurgus* (Scopoli), not having seen the bird itself.

In addition to the generic characters given above, the following also may be mentioned:—

Bill somewhat Plover-like in form, the basal half with the upper and lower outlines nearly parallel and decidedly approximated, the terminal half of the culmen strongly convex, the gonys nearly straight, and decidedly ascending terminally; nostrils small, horizontal, elliptical, situated about half-way between the anterior angle of the eye and the tip of the bill. Primaries 10, reaching to the tips of the tertials, the three outer quills longest and nearly equal, their inner webs slightly narrowed near the end. Tarsus and bare portion of the tibia covered by a continuous frontal and posterior series of transverse scutellæ, these sometimes fused into continuous sheaths; middle toe (exclusive of its claw) about equal to the tarsus (sometimes a little shorter); outer toe equal to the middle toe, but its claw a little shorter; inner toe a little shorter than the outer, but its claw considerably longer; hallux about equal to the basal phalanx of the middle toe, but its claw reaching nearly, if not quite, to the end of the middle toe.

211. *Parra gymnostoma*.

Parra gymnostoma, WAGLER, Isis, 1831, 517.—SCL., P. Z. S. 1856, 283 (S. Mexico to New Granada. Diagnosis and synonymy); 1857, 206 (Jalapa).—SCL. & SALV., Ibis, 1859, 231 (Belize, Honduras; Peten, Guatemala); Nom. Neotr. 1873, 142.—TAYLOR, Ibis, 1860, 315 (Honduras).—SALVIN, Ibis, 1870, 116 (Costa Rica); P. Z. S. 1870, 218 (Costa Rica).—LAWR., Mem. Boston Soc. II, 1874, 312 (Mazatlan, Manzanillo Bay, Zacatula R., and Rio de Coahuylana, W. Mexico. Habits. Descr. nest and eggs); Bull. U. S. Nat. Mus. No. 4, 1876, 50 (Isth. Tehuantepec).—MERRILL, Bull. Nutt. Orn. Club, I, Nov. 1876, 88 (Ft. Brown, Texas; 1 pair; August).

Parra cordifera, LESS., Rev. Zool. 1842, 135 (Acapulco. Descr. adult).—DES MURS, Icon. Orn. 1845, pl. 42.

SP. CH.—*Adult*: Wing, 4.50–5.40; culmen, 1.15–1.40; tarsus, 1.90–2.35; middle toe, 1.85–2.25.‡ Head, neck, jugulum, and extreme anterior portion of the back uniform black, with a faint silky glossy-green gloss below. Rest of the plumage mainly uniform rich purplish chestnut, with a faint purple gloss, brightest or most rufescent on the wings,

* “*Metopodius*, Wagler, 1832.” Type, *Parra africana*, Lath., *vide* Gray.

† “*Hydralector*, Wagler, 1832.” Type, *Parra cristata*, Vicill., *vide* Gray.

‡ Extremes of thirteen examples.

more purplish on the back, rump, and upper tail-coverts, and of a rich dark purplish maroon shade on the breast and sides; anal region, tibiæ, and crissum duller and more grayish. Remiges (except the tertials) pale yellowish pea-green, bordered terminally with dull dusky, this border very narrow, and strictly terminal on the secondaries, but broader and involving more or less of both edges of the quills on the primaries, where it increases in extent to the outer quill, which has the entire outer web blackish; alulæ and primary coverts dull blackish. Tail-feathers uniform rich chestnut. "Iris dark brown; bill, alar spurs, and frontal leaf, bright yellow; upper base of bill bluish white, the space between it and the nasal leaf bright carmine; feet greenish" (Sumichrast, MS., *vide* Lawr., Bull. U. S. Nat. Mus. No. 4, 1876, p. 50).

Young: Frontal leaf rudimentary. Pileum grayish-brown, bordered on each side by a wide and conspicuous superciliary stripe of buffy white, extending to the occiput; below this stripe, another narrower one of black or dusky, beginning at the posterior angle of the eye and extending along the upper edge of the auriculars to the nape, which is also of this color; remainder of the head, with the entire lower parts, except the sides, continuous buffy white, more strongly tinged with buff across the jugulum. Upper parts in general (except the remiges) light grayish-brown, the feathers bordered terminally with rusty buff in the younger stage, but uniform in older individuals; rump more or less tinged with chestnut. Sides and lining of the wing dusky black, but in older examples more or less tinged with chestnut. Remiges as in the adult; rectrices grayish-brown.

The downy young is unknown, or at least if described I have been unable to find out where.

In the considerable series of specimens of this species contained in the collection of the National Museum, notable variations in size and proportions occur among specimens of the same age and sex, but apparently without regard to locality. Cuban specimens do not differ in the least from Mexican and Central American examples.

The following note was published in the Bulletin of the Nuttall Ornithological Club, vol. i, p. 88. I have nothing to add to it, except that during a recent visit to Washington Mr. Ridgway showed me some skins of this curious bird, and I was enabled to positively identify them with the birds I saw:—"Early in August (1876) I saw a pair of water-birds quite new to me on the borders of a lagoon near Fort Brown. I was on horseback at the time, and did not have my gun, but had a good opportunity to observe them carefully. The next day I winged one of them, but it fell into a dense bed of water-plants, and could not be found, and the survivor disappeared. Respecting a letter describing the bird as seen, Mr. Ridgway writes: 'The bird you describe is undoubtedly *Parra gymnostoma*; * * * the chestnut back and yellow (greenish-yellow) wings settle the species beyond a doubt.'"

212. *Cygnus americanus*, Sharpless.

Early in January, 1878, a fine specimen was brought into Brownsville alive by a Mexican, who said that it was caught on a lagoon by one of his dogs. It must have been wounded, though I could see no sign of this. Either this species or the Trumpeter Swan is said to be not uncommon near the coast during winter.

213. *Anser albifrons* var. *gambeli*, Hartl.

The first of the Geese to return in the autumn, usually about the first week in October. Comparatively few of this or the other species of Geese remain throughout the winter, but during the migrations this one is only surpassed in numbers by the Snow Goose. I have seen a flock of at least two hundred pass over Fort Brown as late as the 18th of April.—(*A. gambeli*, DRESSER, Ibis, 1866, 42.)

214. *Chen hyperboreus*, (Pall.)

Very abundant, especially on the salt prairies near the coast.—(DRESSER, Ibis, 1866, 41.—SENNETT, B. Rio Grande, 62.)

215. *Branta canadensis*, (Linn.)

Not rare, but the least common of the Geese in this vicinity.—(*Bernicla c.*, DRESSER, Ibis, 1866, 42.)

216. *Branta hutchinsi*, (Sw. & Rich.)

More abundant than *B. canadensis*, but less so than *A. gambeli*.—(*Bernicla h.*, DRESSER, Ibis, 1866, 42.)

217. *Dendrocygna autumnalis*, (Linn.)

This large and handsome bird arrives from the south in April, and is soon found in abundance on the river banks and lagoons. Migrating at night, it continually utters a very peculiar chattering whistle, which at once indicates its presence. Called by the Mexicans *potos maizal*, or Corn-field Duck, from its habit of frequenting those localities. It is by no means shy, and large numbers are offered for sale in the Brownsville market. Easily domesticated, it becomes very tame, roosting at night in trees with chickens and turkeys. When the females begin to lay, the males leave them, and gather in large flocks on sand-bars in the river. My knowledge of the breeding habits is derived from Dr. S. M. Finley, U. S. A., who had ample opportunity of observing these birds at Hidalgo. The eggs are deposited in hollow trees and branches, often at a considerable distance from water (two miles), and from eight to thirty feet or more from the ground. The eggs are placed on the bare wood, and are from twelve to sixteen in number. Two broods are raised, and the parent carries the young to water in her bill. Twelve eggs received from Dr. Finley average 2.11 by 1.53, with but little variation in size: they are of the usual duck shape, and in color are a rather clear yellowish-white. The birds leave in September, but a few late broods are seen as late as November. The soft parts in a full-plumaged living male were

as follows: iris brown; bill coral-red, orange above; nail of bill bluish; legs and feet pinkish-white.—(DRESSER, *Ibis*, 1862, 42.—SENNETT, B. Rio Grande, 62.)

218. *Dendrocygna fulva*, (Gmel.)

I cannot say much in regard to this species, though it is about as common as the preceding in this vicinity. Like the Corn-field Duck, it is a summer visitant, and both species frequent the same places. The notes while flying are somewhat different. I know nothing definite in regard to the breeding habits, but they probably do not differ much from those of the other bird. Dr. Finley tells me that he did not meet with it at Hidalgo. In a fresh specimen, the bill was bluish-black; legs light slaty-blue.—(DRESSER, *Ibis*, 1866, 42.)

219. *Anas boschas*, Linn.

Not uncommon during the winter months.—(DRESSER, *Ibis*, 1866, 42.)

220. *Anas obscura*, Gm.

Not common; a few remain to breed on the marshes near the coast.—(DRESSER, *Ibis*, 1866, 42.—SENNETT, B. Rio Grande, 63.)

221. *Dafila acuta*, (Linn.)

Rather plentiful.—(DRESSER, *Ibis*, 1866, 43.—SENNETT, B. Rio Grande, 63.)

222. *Chaulelasmus streperus*, (Linn.)

Probably the most common Duck in this vicinity during the winter. My game register shows that a greater number of Gadwalls were killed each winter than of any other Duck. Some remain throughout the summer.—(DRESSER, *Ibis*, 1866, 43.—SENNETT, B. Rio Grande, 63.)

223. *Mareca americana*, (Gm.)

Rather common, especially in spring and autumn.—(DRESSER, *Ibis*, 1866, 43.—SENNETT, B. Rio Grande, 63.)

224. *Nettion carolinensis*, (Gm.)

Common, especially during the migrations.—(DRESSER, *Ibis*, 1866, 43.)

225. *Querquedula discors*, (Linn.)

Common, arriving early in September. A few remain during the winter, but the great majority go farther south, returning about the middle of March.—(DRESSER, *Ibis*, 1866, 43.)

226. *Querquedula cyanoptera*, (Vieill.)

Not rare during the migrations; more are seen in spring than in autumn.

227. *Spatula clypeata*, (Linn.)

Very common in winter. I have seen several pairs on the marshes during the breeding season.—(SENNETT, B. Rio Grande, 63.)

228. *Fulix marila*, (Linn.)

Rather rare.—(DRESSER, *Ibis*, 1866, 43.)

229. *Fulix affinis*, (Eyton.)

Decidedly more common than the last.—(DRESSER, *Ibis*, 1866, 43.—*Fuligula a.*, SENNETT, B. Rio Grande, 63.)

230. *Fulix collaris*, (Donov.)

A few specimens killed.—(DRESSER, *Ibis*, 1866, 43.)

231. *Aythya americana*, (Eyt.)

Not uncommon.—(*Aythya a.*, DRESSER, *Ibis*, 1866, 43.)

232. *Aythya vallisneria*, (Wils.)

Rarer than the last species; but few specimens shot.—(*Aythya v.*, DRESSER, *Ibis*, 1866, 43.)

233. *Bucephala albeola*, (Linn.)

Rather plentiful.—(DRESSER, *Ibis*, 1866, 43.)

234. *Eristmatura rubida*, (Wils.)

Abundant.

235. *Lophodytes cucullatus*, (Linn.)

A few seen during winter.—(DRESSER, *Ibis*, 1866, 44.)

236. *Pelecanus erythrorhynchus*, (Gmel.)

Rather common, and seen at all seasons. I was unable to find any breeding places of this species, but they unquestionably nest near the coast, and also at no great distance from Hidalgo.—(DRESSER, *Ibis*, 1866, 45.—*P. trachyrhynchus*, SENNETT, B. Rio Grande, 63.)

237. *Pelecanus fuscus*, Linn.

Common resident. Found breeding abundantly on Padre and neighboring islands by Mr. Sennett in March, 1878.—(DRESSER, *Ibis*, 1866, 45.—SENNETT, B. Rio Grande, 64.)

238. *Plotus anhinga*, Linn.

Occasionally observed about Fort Brown, but appears to be more abundant in the lagoons higher up the river.—(DRESSER, *Ibis*, 1866, 45.)

239. *Graculus mexicanus*, (Brandt.)

Common resident. I did not find any nests, but think they are placed in the dense growth of trees and thorny bushes that borders most of the lagoons about here.—(DRESSER, *Ibis*, 1866, 45.—SENNETT, B. Rio Grande, 64.)

240. *Larus argentatus*, Gm.

Not rare along the coast in winter. One shot near Fort Brown on the 3d of March, 1877.—(SENNETT, B. Rio Grande, 64.)

241. *Larus delawarensis*, Ord.

Common in winter.—(SENNETT, B. Rio Grande, 64.)

242. *Chræocephalus atricilla*, (Linn.)

Common resident, breeding near the coast, and also on the salt prairies near the fort.—(DRESSER, Ibis, 1866, 44.—*Larus a.*, SENNETT, B. Rio Grande, 64.)

243. *Sterna anglica*, Mont.

Rather abundant. Found breeding in company with Forster's Tern.—(SENNETT, B. Rio Grande, 64.—*S. aranca*, DRESSER, Ibis, 1866, 44.)

244. *Sterna caspia* var. *imperator*, Coues.

Breeds on Padre Island.—(SENNETT, B. Rio Grande, 65.)

245. *Sterna maxima*, Bodd.

Breeds on Padre Island.—(*S. regia*, DRESSER, Ibis, 1866, 44.)

246. *Sterna cantiaca*, Gm.

Breeds on Padre Island.—(SENNETT, B. Rio Grande, 65.)

247. *Sterna forsteri*, Nutt.

On May 16, 1877, Mr. Sennett and I found a colony of these Terns nesting on a nearly submerged grassy island, among lagoons and marshes. They had but just begun to lay. About two dozen eggs were obtained, and a few parents shot for identification. The nests were slight depressions among the short grass, and the eggs were frequently wet.—(SENNETT, B. Rio Grande, 65.)

248. *Sterna antillarum*, (Less.)

Common in summer, and some pass the winter. Deposit their eggs on sand-bars in the river.—(*S. frenata*, DRESSER, Ibis, 1866, 44.—*S. superciliaris antillarum*, SENNETT, B. Rio Grande, 66.)

249. *Hydrochelidon nigra*, (Linn.)

Rather plentiful during summer.—(*H. plumbea*, DRESSER, Ibis, 1866, 45.)

250. *Rhynchops nigra*, Linn.

Not rare in summer.—(DRESSER, Ibis, 1866, 45.—SENNETT, B. Rio Grande, 66.)

251. *Podiceps dominicus*, (Linn.)

A rather common resident. Several nests, undoubtedly of this Grebe, were found on May 16, 1877, while visiting the heronry already referred to. They were made of water-plants and pieces of reeds slightly fastened to one or two tulé-stalks, and forming a wet, floating mass. No eggs were obtained.—(SENNETT, B. Rio Grande, 66.)

NOTE.—So far as it appears, Dr. Merrill's claim (Bull. N. O. C. I, 88), to have been the first to have really added this species to the North

American fauna, must be admitted to be well founded. It was certainly "new to the American fauna", unless it had been previously ascertained to be entitled to be so ranked. Unless Dr. Gambel's attributing this bird to California be admitted, which it cannot be without confirmation, no one can properly make any such claim. The Berlandier eggs—there were no birds—are unidentified, though probably genuine, but of Mexican origin. It is also included in Dr. Coues's Birds of the Northwest, where, however, it is only given as occurring "north to the Rio Grande"—not "north of the Rio Grande". As Dr. Coues gives no authority for regarding it as known to be North American, but stops at the boundary line, the inference is that its presence was conjectural and not positive.—T. M. B.

252. *Podilymbus podiceps*, (Linn.)

Occurs in winter.—(DRESSER, Ibis, 1866, 46.)

AUGUST 1, 1878.

ON A NEW SERRANOID FISH, *EPINEPHELUS DRUMMOND-HAYI*, FROM THE BERMUDAS AND FLORIDA.

By G. BROWN GOODE and TARLETON H. BEAN.

The National Museum possesses two specimens of a Serranoid fish, apparently undescribed, for which we propose the name *Epinephelus Drummond-Hayi*, dedicating the species to Colonel H. M. Drummond Hay, C. M. Z. S., of Leggieden, Perth, Scotland, formerly of the British Army, by whom the species was first discovered at the Bermudas in 1851.

The species is easily recognized by its numerous, small, star-like, white spots on a dark ground, a type of coloration not found in any other representative of this family hitherto described.

A collection of water-color drawings, lent to the Smithsonian Institution by Colonel Drummond Hay, contains an excellent sketch of one of these fishes, which was taken by him on the outer reef of the Bermudas in 1851. This specimen weighed 52½ pounds. The drawing is on the scale of one-fifth.

The smaller specimen (No. 16,795) is fifteen and three-quarters inches long. It was received in May, 1876, from Mr. E. G. Blackford, and was for some days on exhibition in the large glass refrigerator in the Government Building on the Exhibition Grounds in Philadelphia. It was said to have been brought from Southern Florida by one of the New York market fleet. A cast of this fish was made, as well as an accurate sketch in water-colors.

A second specimen (No. 21,255) was received early in May, 1878, from Mr. Silas Stearns of Pensacola, Fla. Its length is sixteen and three-quarters inches. The following description has been prepared from these two specimens. We have seen other specimens of this species in the